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# RIQUALIFICAZIONE DELLA RESIDENZA PER IL TRATTAMENTO RIABILITATIVO DELL' OSPEDALE DI PIACENZA – CORPO 10

CIG 7094855B8D



Livello progettuale:

**PROGETTO ESECUTIVO**

Descrizione elaborato:

**RELAZIONE DI CALCOLO DELLE  
OPERE STRUTTURALI**

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### 1. PROGETTO ARCHITETTONICO

Vedere il progetto architettonico redatto dall'architetto Patrizia Rancati domiciliata in via Bubba 44 a Piacenza e iscritta all'Ordine degli Architetti di Piacenza al numero 731 e dall'ing Alberto Catulli iscritto all'Ordine degli ingegneri della provincia di Piacenza al numero 1086.

### 2. RELAZIONE DI CALCOLO STRUTTURALE

Il progetto è finalizzato al recupero e alla ristrutturazione degli ambienti adibiti a residenza psichiatrica , l'intervento prevede la realizzazione di dieci camere da letto singole, progettate in modo da garantire un adeguato livello di comfort e riservatezza, ed adatte, per dotazioni e spazi, ad un utilizzo e personalizzazione di medio termine, comunque mai inferiore ad un anno, ciascuna con un servizio igienico dedicato, oltre a locali di condivisione comuni (soggiorno/pranzo, cucina) e locali destinati alle attività assistenziali e sanitarie.

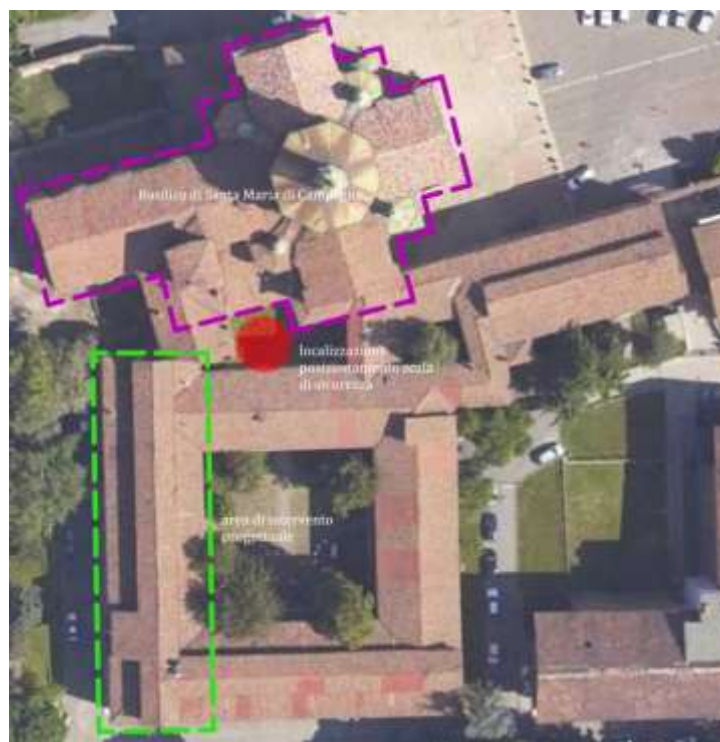
Gli interventi sono:

#### Intervento sulla copertura

Si prevede di eseguire un restauro della copertura lignea dell' ala ovest del chiostro attraverso interventi di consolidamento e sostituzione di elementi lignei danneggiati, recuperando il manto di copertura in coppi, nel rispetto del carattere monumentale dell'edificio.

#### Realizzazione di una scala di sicurezza

Il progetto per la realizzazione della scala di sicurezza, obbligatoria ai fini del rispetto della normativa antincendio a ridosso della facciata nord del chiostro



***Figura 1. Individuazione degli interventi***



### 2.1 ILLUSTRAZIONE SINTETICA DEGLI ELEMENTI ESSENZIALI DEL PROGETTO STRUTTURALE

#### 2.1.1 PUNTO A)

##### 2.1.1.1 DESCRIZIONE DEL CONTESTO EDILIZIO E CARATTERISTICHE GEOLOGICHE E MORFOLOGICHE DEL SITO

Il complesso architettonico, denominato "Chiostro di Santa Vittoria", unitamente all'intero comparto storico ospedaliero, è collocato all'interno del tessuto storico del Comune di Piacenza, in prossimità dell'ingresso est della Città storica delimitata dalle Mura Farnesiane, all'interno del percorso urbano della via Francigena.

Il chiostro, edificato nel sedicesimo secolo a fianco della Basilica di Santa Maria di Campagna in Piazzale delle Crociate, era in origine un convento appartenente ai frati francescani.

A cavallo tra l'800 ed il '900 la Provincia ottenne l'autorizzazione ad utilizzare il convento come manicomio.

L'immobile è censito al Catasto Fabbricati del Comune di Piacenza al Foglio 110, Mappale 183 ed è soggetto alle norme di tutela previste dal D.Lgs. 42/2004 (Codice dei beni culturali e del paesaggio).



***Figura 2. Ortofoto***





### 2.1.2 PUNTO B)

#### 2.1.2.1 DESCRIZIONE GENERALE DELLA STRUTTURA

Il fabbricato ha un'impronta rettangolare di lati 5,40m x 23,70 m circa e si sviluppa per un piano fuori terra (piano terra, piano primo e copertura). La struttura portante è costituita da telai in cemento armato di nuova realizzazione, i solai sono realizzati in laterocemento; la luce massima dei solai è pari a 4,80 m. L'esistente struttura portante in muratura viene demolita fino a livello del primo solaio e all'interno delle pareti sono ricavati gli alloggiamenti dei pilastri. La struttura esistente dopo l'intervento assolve solo a funzione di tamponamento perimetrale viene sgravata da ogni funzione statica.

#### 2.1.2.2 DESCRIZIONE DELLE DESTINAZIONI D'USO PREVISTE

La destinazione d'uso prevista è quella di Categoria A ambienti ad uso residenziale (Cat. A Tab. 3.1.II del D.M. 17/01/2018 "Norme Tecniche per le Costruzioni").

### 2.1.3 PUNTO C)

#### 2.1.3.1 NORMATIVA TECNICA DI RIFERIMENTO

I calcoli delle strutture sono stati eseguiti in base alle seguenti disposizioni:

Legge 5 novembre 1971 N. 1086 - Norme per la disciplina delle opere in conglomerato cementizio armato normale e precompresso ed a struttura metallica.

Norme tecniche per le Costruzioni - D.M. 17/01/2018

Circolare 21 gennaio 2019 n° 7/C.S.LL.PP.



## 2.1.4 PUNTO D)

## 2.1.4.1 DEFINIZIONE DEI PARAMETRI DI PROGETTO CHE CONCORRONO ALLA DEFINIZIONE DELL'AZIONE SISMICA

Si riportano di seguito i parametri di definizione dell'azione sismica:

## INTESTAZIONE E DATI CARATTERISTICI DELLA STRUTTURA

Tipo di struttura	Nello Spazio
Tipo di analisi	Statica modale
Tipo di soluzione	Lineare
Normativa	NTC/2018

## 2.1.4.2 AZIONI CONSIDERATE SULLA COSTRUZIONE

## 2.1.4.2.1 AZIONI STATICHE SCALA

<i>CARICHI PERMANENTI STRUTTURALI</i>	
Peso proprio acciaio	78,5 kN/m <sup>3</sup>

<i>CARICHI PERMANENTI NON STRUTTURALI</i>	
Gradini in lamiera	0,50 kN/m <sup>2</sup>
Totale permanenti non strutturali	3,50 kN/m <sup>2</sup>

Parapetti	0,20 kN/m
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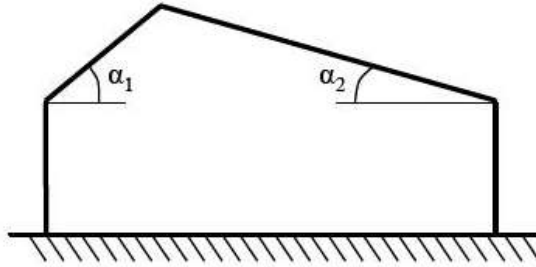
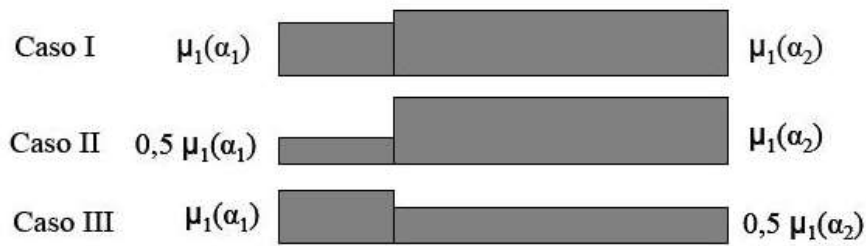
<i>CARICHI VARIABILI</i>	
Cat. A Scale comuni	4,00 kN/m <sup>2</sup>

## 2.1.4.2.2 CARICHI VERTICALI SOLAIO COPERTURA

<i>CARICHI PERMANENTI STRUTTURALI SOLAIO</i>	
Travetti	0,10 kN/m <sup>2</sup>
Totale permanenti strutturali	0,10 kN/m <sup>2</sup>

<i>CARICHI PERMANENTI NON STRUTTURALI</i>	
Coppi	0,80 kN/m <sup>2</sup>
Sottocoppo	0,20 kN/m <sup>2</sup>
Reggicoppi	0,10 kN/m <sup>2</sup>
Totale permanenti non strutturali	1,10 kN/m <sup>2</sup>

<i>CARICHI VARIABILI</i>	
Neve	1,20 kN/m <sup>2</sup>

Calcolo del carico della neve

- Regione: Emilia Romagna
- Provincia: Piacenza
- Ubicazione: Zona I - Mediterranea
- Quota sito s.l.m.m.  $a_s$ : 65,00 m
- Topografia: Normale
- Coefficiente di esposizione  $C_E$ : 1,0
- Coefficiente termico  $C_t$ : 1,00
- Valore caratteristico di carico neve al suolo ( $T_R=50$ anni)  $q_{sk}$ : 1,50 kN/m<sup>2</sup>
- Angolo  $\alpha_1$  della falda 1 sull'orizzontale: 24,00°
- Angolo  $\alpha_2$  della falda 2 sull'orizzontale: 24,00°
- Coefficiente di forma  $\mu_1(\alpha_1)$ : 0,80
- Coefficiente di forma  $\mu_1(\alpha_2)$ : 0,80

## Caso (I) - Carico neve in assenza di vento

- Carico neve su falda 1  $q_1$ : 1,20 kN/m<sup>2</sup>
- Carico neve su falda 2  $q_2$ : 1,20 kN/m<sup>2</sup>

## Caso (II) - Carico neve in presenza di vento

- Carico neve su falda 1  $q_1$ : 0,60 kN/m<sup>2</sup>
- Carico neve su falda 2  $q_2$ : 1,20 kN/m<sup>2</sup>

## Caso (III) - Carico neve in presenza di vento

- Carico neve su falda 1  $q_1$ : 1,20 kN/m<sup>2</sup>
- Carico neve su falda 2  $q_2$ : 0,60 kN/m<sup>2</sup>

### 2.1.4.2.3 AZIONI SISMICHE

Le azioni sismiche di progetto, in base alle quali valutare il rispetto dei diversi stati limite considerati, si definiscono a partire dalla “pericolosità sismica di base” del sito di costruzione, che costituisce l’elemento di conoscenza primario per la determinazione delle azioni sismiche.

La pericolosità sismica è definita in termini di accelerazione orizzontale massima attesa  $a_g$  in condizioni di campo libero su sito di riferimento rigido con superficie topografica orizzontale di categoria A, nonché di ordinate dello spettro di risposta elastico in accelerazione ad essa corrispondente  $S_e(T)$ , con riferimento a prefissate probabilità di eccedenza  $P_{VR}$  nel periodo di riferimento  $V_R$ .

Nei confronti delle azioni sismiche gli stati limite, sia di esercizio che ultimi, sono individuati riferendosi alle prestazioni della costruzione nel suo complesso, includendo gli elementi strutturali, quelli non strutturali e gli impianti.

Le NTC considerano gli edifici ospedalieri costruzioni con funzioni pubbliche strategiche per la protezione civile nella gestione delle calamità.

Nel presente progetto è stata verificata la combinazione di carico sismica con riferimento:

- Stato limite ultimo di salvaguardia della vita (SLV): a seguito del terremoto l’edificio subisce rotture e crolli dei componenti non strutturali ed impiantistici e significativi danni dei componenti strutturali cui si associa una perdita significativa di rigidezza nei confronti delle azioni orizzontali; mentre conserva invece una parte della resistenza e rigidezza per azioni verticali e un margine di sicurezza nei confronti del collasso per azioni sismiche orizzontali.
- Stato Limite di Danno (SLD): a seguito del terremoto la costruzione nel suo complesso, includendo gli elementi strutturali, quelli non strutturali, le apparecchiature rilevanti alla sua funzione, subisce danni tali da non mettere a rischio gli utenti e da non compromettere significativamente la capacità di resistenza e di rigidezza nei confronti delle azioni verticali ed orizzontali, mantenendosi immediatamente utilizzabile pur nell’interruzione d’uso di parte delle apparecchiature.

#### VITA NOMINALE

La vita nominale di un’opera strutturale è intesa come il numero di anni nel quale la struttura, purché soggetta alla manutenzione ordinaria, deve poter essere usata per lo scopo al quale è destinata. Nel caso in oggetto, l’opera ricade all’interno del tipo di costruzione 2:

“Opere ordinarie, ponti, opere infrastrutturali e dighe di dimensioni contenute o di importanza normale” (paragrafo 2.4 delle ‘Nuove Norme tecniche per le costruzioni – D.M. 17 gennaio 2018”).

La vita nominale si assume pertanto pari a  $V_N = 50$  anni.

#### CLASSE D’USO

In presenza di azioni sismiche, con riferimento alle conseguenze di una interruzione di operatività o di un’eventuale collasso, le costruzioni sono suddivise in classi d’uso. Nel caso in oggetto si fa riferimento alla Classe IV:

“Costruzioni il cui uso preveda affollamenti significativi.....”

Il coefficiente d’uso si assume pertanto pari a  $c_u = 2,0$ .

### PERIODO DI RIFERIMENTO PER L'AZIONE SISMICA

Le azioni sismiche su ciascuna costruzione vengono valutate in relazione ad un periodo di riferimento  $V_R$  che si ricava, per ciascun tipo di costruzione, moltiplicandone la vita nominale  $V_N$  per il coefficiente d'uso  $C_U$ . Tale coefficiente è funzione della classe d'uso.

$$V_R = V_N \times C_U = 50 \text{ anni} \times 2,0 = 100 \text{ anni}$$

Le probabilità di superamento  $P_{VR}$  nel periodo di riferimento  $V_R$ , cui riferirsi per individuare l'azione sismica agente, sono pari:

- al 10% nel caso dello stato limite SLV.
- al 63% nel caso dello stato limite SLD

### PARAMETRI DI PROGETTO

Le azioni di progetto si ricavano, ai sensi delle NTC, dalle accelerazioni  $a_g$  e dalle relative forme spettrali.

Le forme spettrali previste dalle NTC sono definite, su sito di riferimento rigido orizzontale, in funzione dei tre parametri:

- $a_g$  accelerazione orizzontale massima del terreno;
- $F_0$  valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale;
- $T_C^*$  periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale.

Per ciascun nodo del reticolo di riferimento e per ciascuno dei periodi di ritorno  $T_R$  considerati dalla pericolosità sismica, i tre parametri si ricavano riferendosi ai valori corrispondenti al 50 esimo percentile ed attribuendo ad:

- $a_g$  il valore previsto dalla pericolosità sismica;
- $F_0$  e  $T_C^*$  i valori ottenuti imponendo che le forme spettrali in accelerazione, velocità e spostamento previste dalle NTC scartino al minimo dalle corrispondenti forme spettrali previste dalla pericolosità sismica.

Le forme spettrali previste dalle NTC sono caratterizzate da prescelte probabilità di superamento e vite di riferimento. A tal fine occorre fissare:

- la vita di riferimento  $V_R$  della costruzione;
- le probabilità di superamento nella vita di riferimento  $P_{VR}$  associate agli stati limite considerati, per individuare infine, a partire dai dati di pericolosità sismica disponibili, le corrispondenti azioni sismiche.

A tal fine è conveniente utilizzare, come parametro caratterizzante la pericolosità sismica, il periodo di ritorno dell'azione sismica  $T_R$ , espresso in anni. Fissata la vita di riferimento  $V_R$ , i due parametri  $T_R$  e  $P_{VR}$  sono immediatamente esprimibili, l'uno in funzione dell'altro, mediante l'espressione:

$$T_R = -\frac{V_R}{\ln(1-P_{VR})}$$

I valori dei parametri  $a_g$ ,  $F_0$  e  $T_C^*$  relativi alla pericolosità sismica su reticolo di riferimento nell'intervallo di riferimento sono forniti nelle tabelle riportate nell'ALLEGATO B delle NTC.

I punti del reticolo di riferimento sono definiti in termini di Latitudine e Longitudine ed ordinati a Latitudine e Longitudine crescenti, facendo variare prima la Longitudine e poi la Latitudine.



CLASSIFICAZIONE SISMICA DEL TERRENO

Per ciò che riguarda l'azione sismica il sottosuolo risulta di categoria C.

Categoria	Descrizione
A	<i>Ammassi rocciosi affioranti o terreni molto rigidi caratterizzati da valori di <math>V_{s,30}</math> superiori a 800 m/s, eventualmente comprendenti in superficie uno strato di alterazione, con spessore massimo pari a 3 m.</i>
B	<i>Rocce tenere e depositi di terreni a grana grossa molto addensati o terreni a grana fina molto consistenti con spessori superiori a 30 m, caratterizzati da un graduale miglioramento delle proprietà meccaniche con la profondità e da valori di <math>V_{s,30}</math> compresi tra 360 m/s e 800 m/s (ovvero <math>N_{SPT,30} &gt; 50</math> nei terreni a grana grossa e <math>c_{u,30} &gt; 250</math> kPa nei terreni a grana fina).</i>
C	<i>Depositi di terreni a grana grossa mediamente addensati o terreni a grana fina mediamente consistenti con spessori superiori a 30 m, caratterizzati da un graduale miglioramento delle proprietà meccaniche con la profondità e da valori di <math>V_{s,30}</math> compresi tra 180 m/s e 360 m/s (ovvero <math>15 &lt; N_{SPT,30} &lt; 50</math> nei terreni a grana grossa e <math>70 &lt; c_{u,30} &lt; 250</math> kPa nei terreni a grana fina).</i>
D	<i>Depositi di terreni a grana grossa scarsamente addensati o di terreni a grana fina scarsamente consistenti, con spessori superiori a 30 m, caratterizzati da un graduale miglioramento delle proprietà meccaniche con la profondità e da valori di <math>V_{s,30}</math> inferiori a 180 m/s (ovvero <math>N_{SPT,30} &lt; 15</math> nei terreni a grana grossa e <math>c_{u,30} &lt; 70</math> kPa nei terreni a grana fina).</i>
E	<i>Terreni dei sottosuoli di tipo C o D per spessore non superiore a 20 m, posti sul substrato di riferimento (con <math>V_s &gt; 800</math> m/s).</i>

Si rimanda alle relazioni geologiche-geotecniche ed alla relazione di caratterizzazione sismica per un più approfondito dettaglio delle caratteristiche del suolo.

SPETTRO DI RISPOSTA ELASTICO IN ACCELERAZIONE

Lo spettro di risposta elastico in accelerazione è espresso da una forma spettrale (spettro normalizzato) riferita ad uno smorzamento convenzionale del 5%, moltiplicata per il valore della accelerazione orizzontale massima  $a_g$  su sito di riferimento rigido orizzontale. Sia la forma spettrale che il valore di  $a_g$  variano al variare della probabilità di superamento nel periodo di riferimento  $P_{VR}$ .

SPETTRO DI RISPOSTA ELASTICO IN ACCELERAZIONE COMPONENTI ORIZZONTALI

Lo spettro di risposta elastico della componente orizzontale è definito dalle espressioni seguenti:

$$0 \leq T \leq T_B \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_0 \left[ \frac{T}{T_B} + \frac{1}{\eta \cdot F_0} \cdot \left( 1 - \frac{T}{T_B} \right) \right]$$

$$T_B \leq T \leq T_C \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_0$$

$$T_C \leq T \leq T_D \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_0 \cdot \frac{T_C}{T}$$

$$T_D \leq T \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_0 \cdot \left( \frac{T_C \cdot T_D}{T^2} \right)$$

nelle quali T ed  $S_e$  sono, rispettivamente, periodo di vibrazione ed accelerazione spettrale orizzontale.

Inoltre:

S: è il coefficiente che tiene conto della categoria di sottosuolo e delle condizioni topografiche mediante la relazione seguente:  $S = S_S \cdot S_T$

essendo  $S_S$  il coefficiente di amplificazione stratigrafica e  $S_T$  il coefficiente di amplificazione topografica riportati nelle tabelle seguenti;

CATEGORIA SOTTOSUOLO	$S_S$	$C_C$
A	1,00	1,00
B	$1,00 \leq 1,40 - 0,40 \cdot F_0 \cdot \frac{a_g}{g} \leq 1,20$	$1,10 \cdot (T^*_C)^{-0,20}$
C	$1,00 \leq 1,70 - 0,60 \cdot F_0 \cdot \frac{a_g}{g} \leq 1,50$	$1,05 \cdot (T^*_C)^{-0,33}$
D	$0,90 \leq 2,40 - 1,50 \cdot F_0 \cdot \frac{a_g}{g} \leq 1,80$	$1,25 \cdot (T^*_C)^{-0,50}$
E	$1,00 \leq 2,00 - 1,10 \cdot F_0 \cdot \frac{a_g}{g} \leq 1,60$	$1,15 \cdot (T^*_C)^{-0,40}$

CATEGORIA TOPOGRAFICA	Ubicazione dell'opera o dell'intervento	$S_T$
T1	-	1,00
T2	In corrispondenza della sommità del pendio	1,2
T3	In corrispondenza della cresta del rilievo	1,2
T4	In corrispondenza della cresta del rilievo	1,2

- $\eta$ : è il fattore che altera lo spettro elastico per coefficienti di smorzamento viscosi convenzionali  $x$  diversi dal 5%, mediante la relazione:  $\eta = \sqrt{\frac{10}{(5 + \xi)}} \geq 0,55$
- dove  $\xi$  (espresso in percentuale) è valutato sulla base di materiali, tipologia strutturale e terreno di fondazione;
- $F_0$ : è il fattore che quantifica l'amplificazione spettrale massima, su sito di riferimento rigido orizzontale, ed ha valore minimo pari a 2,2;
- $T_C$ : è il periodo corrispondente all'inizio del tratto a velocità costante dello spettro, dato da:  $T_C = C_C \cdot T^*_C$ ; dove  $C_C$  è un coefficiente funzione della categoria di sottosuolo;
- $T_B$ : è il periodo corrispondente all'inizio del tratto dello spettro ad accelerazione costante;  $T_B = T_C / 3$
- $T_D$ : è il periodo corrispondente all'inizio del tratto a spostamento costante dello spettro, espresso in secondi mediante la relazione:  $T_D = 4,0 \cdot \frac{a_g}{g} + 1,6$

SPETTRO DI RISPOSTA ELASTICO IN ACCELERAZIONE COMPONENTI VERTICALI

Lo spettro di risposta elastico in accelerazione della componente verticale è definito dalle espressioni seguenti:

$$0 \leq T \leq T_B \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_V \left[ \frac{T}{T_B} + \frac{1}{\eta \cdot F_O} \cdot \left( 1 - \frac{T}{T_B} \right) \right]$$

$$T_B \leq T \leq T_C \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_V$$

$$T_C \leq T \leq T_D \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_V \cdot \frac{T_C}{T}$$

$$T_D \leq T \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_V \cdot \left( \frac{T_C \cdot T_D}{T^2} \right)$$

nelle quali T e  $S_{ve}$  sono, rispettivamente, periodo di vibrazione ed accelerazione spettrale verticale e  $F_V$  è il fattore che quantifica l'amplificazione spettrale massima, in termini di accelerazione orizzontale massima del terreno  $a_g$  su sito di riferimento rigido orizzontale, mediante la relazione:

$$F_V = 1,35 \cdot F_O \cdot \left( \frac{a_g}{g} \right)^{0,5}$$

I valori di  $a_g$ ,  $F_O$ ,  $S_T$ ,  $S$ ,  $\eta$  sono quelli già definiti per le componenti orizzontali; i valori di  $S_S$ ,  $T_B$ ,  $T_C$  e  $T_D$ , sono invece quelli riportati nella tabella seguente.

CATEGORIA SOTTOSUOLO	$S_S$	$T_B$	$T_C$	$T_D$
A, B, C, D, E	1,00	0,05 s	0,15 s	1,0 s

SPETTRO DI PROGETTO

Per gli stati limite di esercizio lo spettro di progetto  $S_d(T)$  da utilizzare, sia per le componenti orizzontali che per la componente verticale, è lo spettro elastico corrispondente, riferito alla probabilità di superamento nel periodo di riferimento  $P_{VR}$  considerata.

Per le verifiche agli stati limite ultimi lo spettro di progetto  $S_d(T)$  da utilizzare, sia per le componenti orizzontali, sia per la componente verticale, è lo spettro elastico corrispondente riferito alla probabilità di superamento nel periodo di riferimento  $P_{VR}$  considerata con le ordinate ridotte sostituendo  $\eta$  con  $1/q$ , dove q è il fattore di struttura, nelle formule precedentemente riportate e comunque:  $S_d(T) \geq 0,2 \cdot a_g$ .

Nel caso specifico si assume q unitario in quanto si tratta di una struttura in acciaio non dissipativa.

### FASE 1. INDIVIDUAZIONE DELLA PERICOLOSITÀ DEL SITO

Ricerca per coordinate

Ricerca per comune

LONGITUDINE  
9.7004

LATITUDINE  
45.0477

LATITUDINE  
45.0477

REGIONE  
Emilia-Romagna

PROVINCIA  
Piacenza

COMUNE  
Piacenza

Elaborazioni grafiche

Grafici spettri di risposta

Variabilità dei parametri

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Elaborazioni numeriche

Tabella parametri

Reticolo di riferimento

Controllo sul reticolo

- Sito esterno al reticolo
- Interpolazione su 3 nodi
- Interpolazione corretta

Interpolazione

superficie rigata

La "Ricerca per comune" utilizza le coordinate ISTAT del comune per identificare il sito. Si sottolinea che all'interno del territorio comunale le azioni sismiche possono essere significativamente diverse da quelle così individuate e si consiglia, quindi, la "Ricerca per coordinate".

Nodi del reticolo intorno al sito

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FASE 3

### FASE 2. SCELTA DELLA STRATEGIA DI PROGETTAZIONE

Vita nominale della costruzione (in anni) -  $V_N$   info

Coefficiente d'uso della costruzione -  $C_U$   info

Valori di progetto

Periodo di riferimento per la costruzione (in anni) -  $V_R$   info

Periodi di ritorno per la definizione dell'azione sismica (in anni) -  $T_R$  info

Stati limite di esercizio - SLE	SLO - $P_{VR} = 81\%$	60	Stati limite ultimi - SLU	SLV - $P_{VR} = 10\%$	949
	SLD - $P_{VR} = 63\%$	101		SLC - $P_{VR} = 5\%$	1950

Elaborazioni

Grafici parametri azione

Grafici spettri di risposta

Tabella parametri azione

Strategia di progettazione

LEGENDA GRAFICO

---□--- Strategia per costruzioni ordinarie

.....■..... Strategia scelta

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### FASE 3. DETERMINAZIONE DELL'AZIONE DI PROGETTO

**Stato Limite**  
Stato Limite considerato: **SLV** info

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**Risposta sismica locale**  
 Categoria di sottosuolo: **C** info       $S_E = 1.500$        $C_C = 1.570$  info  
 Categoria topografica: **T1** info       $h/H = 0.000$        $S_T = 1.000$  info  
(h=quota sito, H=altezza rilievo topografico)

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**Compon. orizzontale**  
 Spettro di progetto elastico (SLE)      Smorzamento  $\xi$  (%): **5**       $\eta = 1.000$  info  
 Spettro di progetto inelastico (SLU)      Fattore  $q_o$ : **1**      Regol. in altezza: **si** info

---

**Compon. verticale**  
 Spettro di progetto      Fattore  $q$ : **1.5**       $\eta = 0.667$  info

---

**Elaborazioni**  
 Grafici spettri di risposta ▶▶▶  
 Parametri e punti spettri di risposta ▶▶▶

— Spettro di progetto - componente orizzontale

— Spettro di progetto - componente verticale

— Spettro elastico di riferimento (Cat. A-T1,  $\xi = 5\%$ )

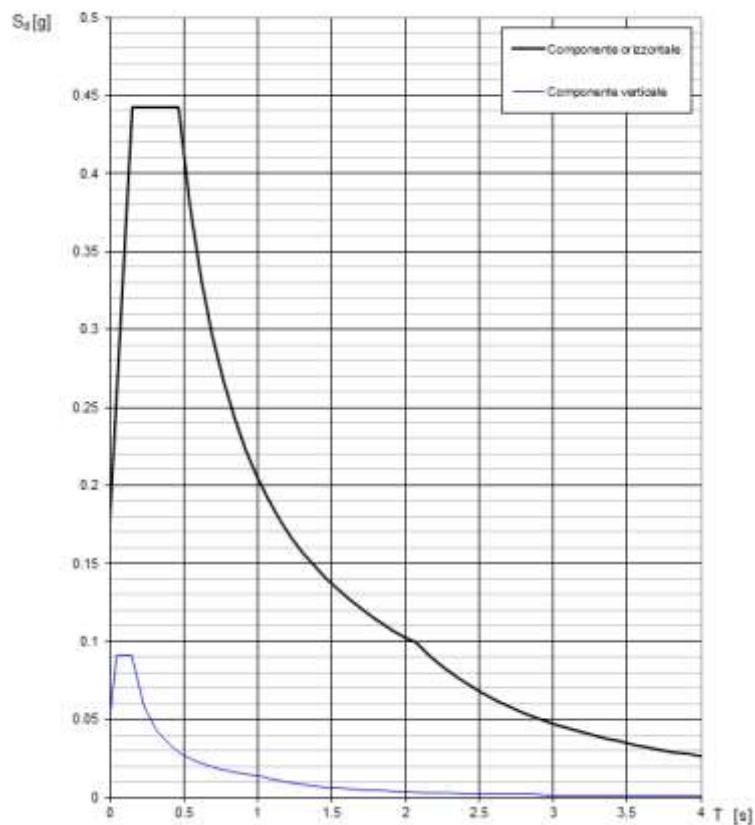
**Spettri di risposta**

$S_{d,h}$  [g]  
 $S_{d,v}$  [g]  
 $S_e$  [g]

T [s] 4

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



**Parametri e punti dello spettro di risposta orizzontale per lo stato SLV**

**Parametri indipendenti**

STATO LIMITE	SLV
$a_g$	0.118 g
$F_o$	2.497
$T_c$	0.295 s
$S_s$	1.500
$C_c$	1.570
$S_T$	1.000
$q$	1.000

**Parametri dipendenti**

$S$	1.500
$\eta$	1.000
$T_B$	0.155 s
$T_C$	0.464 s
$T_D$	2.073 s

**Espressioni dei parametri dipendenti**

$$S = S_s \cdot S_T \quad (\text{NTC-08 Eq. 3.2.5})$$

$$\eta = \sqrt{10/(5 + \xi)} \geq 0,55; \eta = 1/q \quad (\text{NTC-08 Eq. 3.2.6; §. 3.2.3.5})$$

$$T_B = T_c / 3 \quad (\text{NTC-07 Eq. 3.2.8})$$

$$T_C = C_c \cdot T_c \quad (\text{NTC-07 Eq. 3.2.7})$$

$$T_D = 4,0 \cdot a_g / \xi + 1,6 \quad (\text{NTC-07 Eq. 3.2.9})$$

**Espressioni dello spettro di risposta (NTC-08 Eq. 3.2.4)**

$$0 \leq T < T_B \quad S_c(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left[ \frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left( 1 - \frac{T}{T_B} \right) \right]$$

$$T_B \leq T < T_C \quad S_c(T) = a_g \cdot S \cdot \eta \cdot F_o$$

$$T_C \leq T < T_D \quad S_c(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left( \frac{T_C}{T} \right)$$

$$T_D \leq T \quad S_c(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left( \frac{T_C \cdot T_D}{T^2} \right)$$

Lo spettro di progetto  $S_d(T)$  per le verifiche agli Stati Limite Ultimi è ottenuto dalle espressioni dello spettro elastico  $S_e(T)$  sostituendo  $\eta$  con  $1/q$ , dove  $q$  è il fattore di struttura. (NTC-08 § 3.2.3.5)

**Punti dello spettro di risposta**

	T [s]	Se [g]
	0.000	0.177
$T_B \leftarrow$	0.155	0.443
$T_C \leftarrow$	0.464	0.443
	0.540	0.380
	0.617	0.333
	0.694	0.296
	0.770	0.267
	0.847	0.242
	0.923	0.222
	1.000	0.205
	1.077	0.191
	1.153	0.178
	1.230	0.167
	1.306	0.157
	1.383	0.148
	1.460	0.141
	1.536	0.134
	1.613	0.127
	1.690	0.121
	1.766	0.116
	1.843	0.111
	1.919	0.107
	1.996	0.103
$T_D \leftarrow$	2.073	0.099
	2.164	0.091
	2.256	0.084
	2.348	0.077
	2.440	0.071
	2.532	0.066
	2.623	0.062
	2.715	0.058
	2.807	0.054
	2.899	0.051
	2.990	0.048
	3.082	0.045
	3.174	0.042
	3.266	0.040
	3.358	0.038
	3.449	0.036
	3.541	0.034
	3.633	0.032
	3.725	0.031
	3.816	0.029
	3.908	0.028
	4.000	0.027

**DETERMINAZIONE DELLA MASSA PARTECIPANTE**

La determinazione dell'azione sismica viene calcolata considerando le masse associate ai seguenti carichi gravitazionali:

$$G_1 + G_2 + \sum_j \Psi_{2j} \cdot Q_{kj}$$

dove  $G_1$  e  $G_2$  riguardano le masse associate al peso proprio delle strutture ed ai carichi permanenti, mentre  $Q_{kj}$  riguarda le masse associate ai carichi accidentali.

**2.1.5 PUNTO E) DESCRIZIONE DEI MATERIALI****2.1.5.1 CONGLOMERATO CEMENTIZIO**

Riferimenti:

- D.M. 17.01.2018, par. 11.2;

Linee Guida per la messa in opera del calcestruzzo strutturale;

- UNI EN 206-1/2006;
- UNI 11104.

Qualità dei componenti

La sabbia deve essere viva, con grani assortiti in grossezza da 0 a 3 mm, non proveniente da rocce in decomposizione, scricchiolante alla mano, pulita, priva di materie organiche, melmose, terrose e di salsedine. La ghiaia deve contenere elementi assortiti, di dimensioni fino a 16 mm, resistenti e non gelivi, non friabili, scevri di sostanze estranee, terra e salsedine. Le ghiaie sporche vanno accuratamente lavate. Anche il pietrisco proveniente da rocce compatte, non gessose né gelive, dovrà essere privo di impurità od elementi in decomposizione.

In definitiva gli inerti dovranno essere lavati ed esenti da corpi terrosi ed organici. Non sarà consentito assolutamente il misto di fiume. L'acqua da utilizzare per gli impasti dovrà essere potabile, priva di sali (cloruri e solfuri).

Potranno essere impiegati additivi fluidificanti o superfluidificanti per contenere il rapporto acqua/cemento mantenendo la lavorabilità necessaria.

Prescrizione per inerti

Sabbia viva 0-7 mm, pulita, priva di materie organiche e terrose; sabbia fino a 20 mm (30mm per fondazioni), non geliva, lavata; pietrisco di roccia compatta.

Prescrizione per il disarmo

Per ogni porzione di struttura, il disarmo non può essere eseguito se non previa autorizzazione della Direzione Lavori.

<b>Tipologia strutturale:</b>	<b>Fondazioni</b>
Classe di resistenza necessaria ai fini statici: C25/30	30 N/mm <sup>2</sup> (300 daN/cm <sup>2</sup> )
Condizioni ambientali:	Parti di strutture di contenimento liquidi, fondazioni. Calcestruzzo armato ordinario o precompresso prevalentemente immerso in acqua o terreno non aggressivo.
Classe di esposizione:	XC2
Rapporto acqua/cemento max:	0.60
Classe di consistenza:	S4 (Fluida) con Additivo Superfluidificante
Diametro massimo aggregati:	30 mm

Parametri caratteristici e tensioni limite per il metodo degli stati limite

Tabella riassuntiva per vari Rck

Rck	f <sub>ck</sub>	f <sub>cd</sub>	f <sub>ctm</sub>	u.m.
250	207.5	117.6	22.7	[kg/cm <sup>2</sup> ]
<b>300</b>	<b>249.0</b>	<b>141.1</b>	<b>25.6</b>	<b>[kg/cm<sup>2</sup>]</b>
350	290.5	164.6	28.3	[kg/cm <sup>2</sup> ]
400	332.0	188.1	31.0	[kg/cm <sup>2</sup> ]
450	373.5	211.6	33.5	[kg/cm <sup>2</sup> ]
500	415.0	235.2	36.0	[kg/cm <sup>2</sup> ]

legenda:

f<sub>ck</sub> (resistenza cilindrica a compressione);

$$f_{ck} = 0.83 R_{ck};$$

f<sub>cd</sub> (resistenza di calcolo a compressione);

$$f_{cd} = \alpha_{cc} * f_{ck} / \gamma_c$$

f<sub>ctd</sub> (resistenza di calcolo a trazione);

$$f_{ctd} = f_{ctk} / \gamma_c;$$

$$f_{ctk} = 0.7 * f_{ctm};$$

$$f_{ctm} = 0.30 * f_{ck}^{2/3} \quad \text{per classi } \leq C50/60$$

$$f_{ctm} = 2.12 * \ln[1 + f_{cm}/10] \quad \text{per classi } > C50/60$$

Valori indicativi di alcune caratteristiche meccaniche dei calcestruzzi impiegati:

Ritiro (valori stimati): 0.25 mm/m (dopo 5 anni, strutture non armate);  
0.10mm/m (strutture armate).

Rigonfiamento in acqua (valori stimati): 0.20 mm/m (dopo 5 anni in strutture armate).

Dilatazione termica: 10\*10<sup>-6</sup> °C<sup>-1</sup>.

Viscosità φ = 1.70.

Prospetto classi di esposizione e composizione uni en 206-1 (uni 11104 marzo 2004)

Denom. della classe	Descrizione dell'ambiente	Esempi informativi di situazioni a cui possono applicarsi le classi di esposizione	UNI 9858	A/C MAX	R'ck min.	Dos. Min. Cem. KG.



## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1 Assenza di rischio di corrosione o attacco						
X0	Per calcestruzzo privo di armatura o inserti metallici: tutte le esposizioni eccetto dove c'è gelo e disgelo o attacco chimico. Calcestruzzi con armatura o inserti metallici: in ambiente molto asciutto	Interno di edifici con umidità relativa molto bassa. Calcestruzzo non armato all'interno di edifici. Calcestruzzo non armato immerso in suolo non aggressivo o in acqua non aggressiva. Calcestruzzo non armato soggetto ad cicli di bagnato asciutto ma non soggetto ad abrasioni, gelo o attacco chimico	1	---	15	---

2 Corrosione indotta da carbonatazione						
Nota - Le condizioni di umidità si riferiscono a quelle presenti nel copriferro e nel ricoprimento di inserti metallici, ma in molti casi si può considerare che tali condizioni riflettano quelle dell'ambiente circostante, in questi la classificazione dell'ambiente circostante può essere adeguata. Questo può non essere il caso se c'è una barriera fra il calcestruzzo ed il suo ambiente.						
XC1	Asciutto o permanentemente bagnato	Interni di edifici con umidità relativa bassa. Calcestruzzo armato ordinario o precompresso con le superfici all'interno di strutture con eccezione delle parti esposte a condensa o immerse in acqua	2a	0,60	30	300
XC2	Bagnato, raramente asciutto	Parti di strutture di contenimento liquidi, fondazioni. Calcestruzzo armato ordinario o precompresso prevalentemente immerso in acqua o terreno non aggressivo.	2a	0,60	30	300
XC3	Umidità moderata	Calcestruzzo armato ordinario o precompresso in esterni con superfici esterne riparate dalla pioggia o in interni con umidità da moderata ad alta	5a	0,55	35	320
XC4	Ciclicamente asciutto e bagnato	Calcestruzzo armato ordinario o precompresso in esterni con superfici soggette ad alternanze di asciutto ed umido. Calcestruzzi a vista in ambienti urbani.	4a, 5b	0,50	40	340

3 Corrosione indotta da cloruri esclusi quelli provenienti dall'acqua di mare						
XD1	Umidità moderata	Calcestruzzo armato ordinario o precompresso in superfici o parti di ponti e viadotti esposti a spruzzi d'acqua contenenti cloruri	5a	0,55	35	320
XD2	Bagnato, raramente asciutto	Calcestruzzo armato ordinario o precompresso in elementi strutturali totalmente immersi in acqua industriali contenente cloruri (piscine)	4a, 5b	0,50	40	340
XD3	Ciclicamente asciutto e bagnato	Calcestruzzo armato ordinario o precompresso, di elementi strutturali direttamente soggetti agli agenti disgelanti o agli spruzzi contenenti agenti disgelanti. Calcestruzzo armato o precompresso, elementi con una superficie immersa in acqua contenente cloruri e l'altra esposta all'aria. Parti di ponti, pavimentazioni e parcheggi per auto.	5c	0,45	45	360

4 Corrosione indotta da cloruri presenti nell'acqua di mare						
XS1	Esposto alla salsedine marina ma non direttamente in contatto con l'acqua	Calcestruzzo armato ordinario o precompresso con elementi strutturali sulle coste o in prossimità	4a, 5b	0,50	40	340
XS2	Permanentemente sommerso	Calcestruzzo armato ordinario o precompresso di strutture marine completamente immersa in acqua	5c	0,45	45	360
XS3	Zone esposte agli spruzzi oppure alla marea	Calcestruzzo armato ordinario o precompresso con elementi strutturali esposti alla battigia o alle zone soggette agli spruzzi ed onde del mare	5c	0,45	45	360

## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

5 Attacco dei cicli gelo/disgelo con o senza disgelanti *(NB XF2 - XF3 - XF4 contenuto minimo aria 3%)						
XF1	Moderata saturazione d'acqua, in assenza di agente disgelante	Superfici verticali di calcestruzzo come facciate o colonne esposte alla pioggia ed al gelo. Superfici non verticali e non soggette alla completa saturazione ma esposte al gelo, alla pioggia o all'acqua	4a, 5b	0,50	40	320
XF2*	Moderata saturazione d'acqua in presenza di agente disgelante	Elementi come parti di ponti che in altro modo sarebbero classificati come XF1 ma che sono esposti direttamente o indirettamente agli agenti disgelanti	3, 4b	0,50	30	340
XF3*	Elevata saturazione d'acqua in assenza di agente disgelante	Superfici orizzontali in edifici dove l'acqua può accumularsi e che possono essere soggetti ai fenomeni di gelo, elementi soggetti a frequenti bagnature ed esposti al gelo	2b, 4b	0,50	30	340
XF4*	Elevata saturazione d'acqua con presenza di agente antigelo oppure acqua di mare	Superfici orizzontali quali strade o pavimentazioni esposte al gelo ed ai sali disgelanti in modo diretto od indiretto, elementi esposti al gelo e soggetti a frequenti bagnature in presenza di agenti disgelanti o di acqua di mare	3, 4b	0,45	35	360

6 Attacco chimico **)						
XA1	Ambiente chimicamente debolmente aggressivo secondo il prospetto 2 della UNI EN 206-1	Contenitori di fanghi e vasche di decantazione. Contenitori e vasche per acqua reflue	5a	0,55	35	320
XA2	Ambiente chimicamente moderatamente aggressivo secondo il prospetto 2 della UNI EN 206-1	Elementi strutturali o pareti a contatto di terreni aggressivi	5b	0,50	40	340
XA3	Ambiente chimicamente fortemente aggressivo secondo il prospetto 2 della UNI EN 206-1	Elementi strutturali o pareti a contatto di acqua industriali fortemente aggressive. Contenitori di foraggi, mangimi e liquami provenienti dall'allevamento animale. Torri di raffreddamento di fumi e gas di scarico industriali.	5c	0,45	45	360

\*) il grado di saturazione della seconda colonna riflette la relativa frequenza con cui si verifica il gelo in condizioni di saturazione: *moderato* occasionalmente gelato in condizioni di saturazione; *elevato* alta frequenza di gelo in condizioni di saturazione.

\*\*\*) da parte di acque del terreno o acqua fluenti

**2.1.5.2 ACCIAIO PER C.A.**

Riferimenti:

- Rif. D.M. 17.01.2018, par. 11.3.2

<b>Acciaio per C.A. B450C</b>	
$f_{yk}$ tensione nominale di snervamento:	$\geq 4580 \text{ kg/cm}^2 (\geq 450 \text{ N/mm}^2)$
$f_{tk}$ tensione nominale di rottura:	$\geq 5500 \text{ kg/cm}^2 (\geq 540 \text{ N/mm}^2)$
$f_{td}$ tensione di progetto a rottura:	$f_{yk} / \gamma_S = f_{yk} / 1.15 = 3980 \text{ kg/cm}^2 (= 391 \text{ N/mm}^2)$

**2.1.5.3 ACCIAIO PER CARPENTERIA**

Riferimenti:

- D.M. 17.01.2018, par. 11.3.4

<b>Acciaio per carpenteria metallica S275 JR</b>	
$f_{yk}$ tensione nominale di snervamento:	$\geq 2750 \text{ kg/cm}^2 (\geq 275 \text{ N/mm}^2)$
$f_{tk}$ tensione nominale di rottura:	$\geq 4300 \text{ kg/cm}^2 (\geq 430 \text{ N/mm}^2)$
$f_{td}$ tensione di progetto a rottura:	$f_{yk} / \gamma_S = f_{yk} / 1.05 = 2619 \text{ kg/cm}^2 (= 262 \text{ N/mm}^2)$

2.1.5.4      LEGNAME PER TRAVETTI E TRAVI

**CLASSI DI RESISTENZA SECONDO EN 338, PER LEGNO DI CONIFERE E DI PIOPPO**

<b>Valori di resistenza modulo elastico e massa volumica</b>		<b>C20</b>
<b>Resistenza (daN)</b>		
Flessione	$f_{m,k}$	200
Trazione parallela alla fibratura	$f_{t,0,k}$	120
Trazione perpendicolare alla fibratura	$f_{t,90,k}$	5
Compressione parallela alla fibratura	$f_{c,0,k}$	190
Compressione perpendicolare alla fibratura	$f_{c,90,k}$	23
Taglio	$f_{v,k}$	22

<b>Modulo elastico (daN)</b>		
Modulo elastico medio parallelo alle fibre	$E_{0,mean}$	95000
Modulo elastico caratteristico parallelo alle fibre	$E_{0,05}$	64000
Modulo elastico medio perpendicolare alle fibre	$E_{90,mean}$	3200
Modulo di taglio medio	$G_{mean}$	5900

<b>Massa volumica (kg/cmc)</b>		
Massa volumica caratteristica	$\rho_k$	0.00033
Massa volumica media	$\rho_m$	0.00039

**CLASSI DI RESISTENZA SECONDO EN 338, PER LEGNO DI LATIFOGLIE (ESCLUSO PIOPPO)**

<b>Valori di resistenza modulo elastico e massa volumica</b>		<b>D30</b>
<b>Resistenza (daN)</b>		
Flessione	$f_{m,k}$	300
Trazione parallela alla fibratura	$f_{t,0,k}$	180
Trazione perpendicolare alla fibratura	$f_{t,90,k}$	6
Compressione parallela alla fibratura	$f_{c,0,k}$	230
Compressione perpendicolare alla fibratura	$f_{c,90,k}$	80
Taglio	$f_{v,k}$	30

<b>Modulo elastico (daN)</b>		
Modulo elastico medio parallelo alle fibre	$E_{0,mean}$	100000
Modulo elastico caratteristico parallelo alle fibre	$E_{0,05}$	80000
Modulo elastico medio perpendicolare alle fibre	$E_{90,mean}$	6400
Modulo di taglio medio	$G_{mean}$	6000

<b>Massa volumica (kg/cmc)</b>		
Massa volumica caratteristica	$\rho_k$	0.00053
Massa volumica media	$\rho_m$	0.00064



Caratteristiche minime dei materiali impiegati per la costruzione delle strutture analizzate con la presente relazione.

### 2.1.6 PUNTO F)

#### 2.1.6.1 ILLUSTRAZIONE DEI CRITERI DI PROGETTAZIONE E DI MODELLAZIONE

##### 2.1.6.1.1 DESCRIZIONE DEL MODELLO

La struttura e il suo comportamento sotto le azioni statiche e sismiche è stata adeguatamente valutato, interpretato e trasferito nel modello che si caratterizza per la sua impostazione completamente tridimensionale. A tal fine ai nodi strutturali possono convergere diverse tipologie di elementi, che corrispondono nel codice numerico di calcolo in altrettante tipologie di elementi finiti. Travi e pilastri, ovvero componenti in cui una dimensione prevale sulle altre due, vengono modellati con elementi "beam", il cui comportamento può essere opportunamente perfezionato attraverso alcune opzioni quali quelle in grado di definire le modalità di connessione all'estremità. Eventuali elementi soggetti a solo sforzo normale possono essere trattati come elementi "truss" oppure con elementi "beam" opportunamente svincolati. Le platee ovvero in generale i componenti strutturali bidimensionali, con due dimensioni prevalenti sulla terza (lo spessore), sono stati modellati con elementi "shell" a comportamento flessionale e membranale. I vincoli con il mondo esterno vengono rappresentati, nei casi più semplici (apparecchi d'appoggio, cerniere, carrelli), con elementi in grado di definire le modalità di vincolo e le rigidità nello spazio. Questi elementi, coniugati con i precedenti, consentono di modellare i casi più complessi ma più frequenti di interazione con il terreno, realizzabile tipicamente mediante fondazioni, pali, platee nonché attraverso una combinazione di tali situazioni.

I parametri dei materiali utilizzati per la modellazione riguardano il modulo di Young, il coefficiente di Poisson, ma sono disponibili anche opzioni per ridurre la rigidità flessionale e tagliante dei materiali per considerare l'effetto di fenomeni fessurativi nei materiali.

Il calcolo viene condotto mediante analisi lineare, ma vengono considerati gli effetti del secondo ordine e si può simulare il comportamento di elementi resistenti a sola trazione o compressione.











La presenza di diaframmi orizzontali, se rigidi, nel piano viene gestita attraverso l'impostazione di un'apposita relazione fra i nodi strutturali coinvolti, che ne condiziona il movimento relativo. Relazioni analoghe possono essere impostate anche fra elementi contigui.

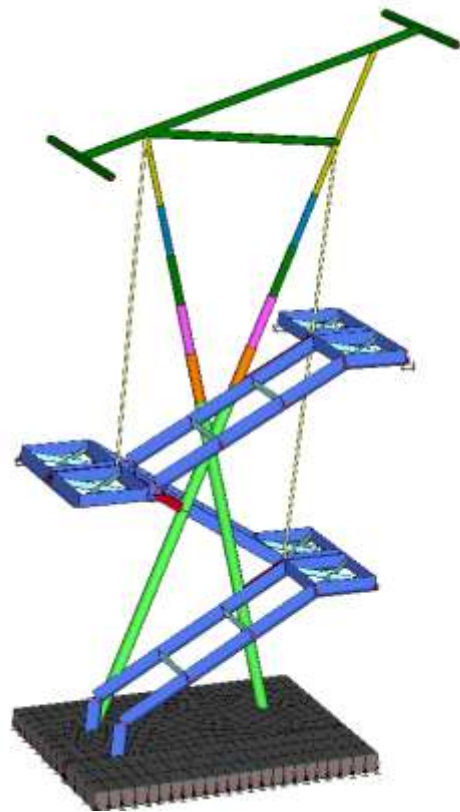
Si ritiene che il modello utilizzato sia rappresentativo del comportamento reale della struttura. Sono stati inoltre valutate tutti i possibili effetti o le azioni anche transitorie che possano essere significative e avere implicazione per la struttura.

E' stata impiegata un'analisi sismica modale in campo lineare con adozione di spettro di risposta conforme al D.M. 17.01.2018. Agli effetti del dimensionamento è stato quindi impiegato il metodo degli stati limite.



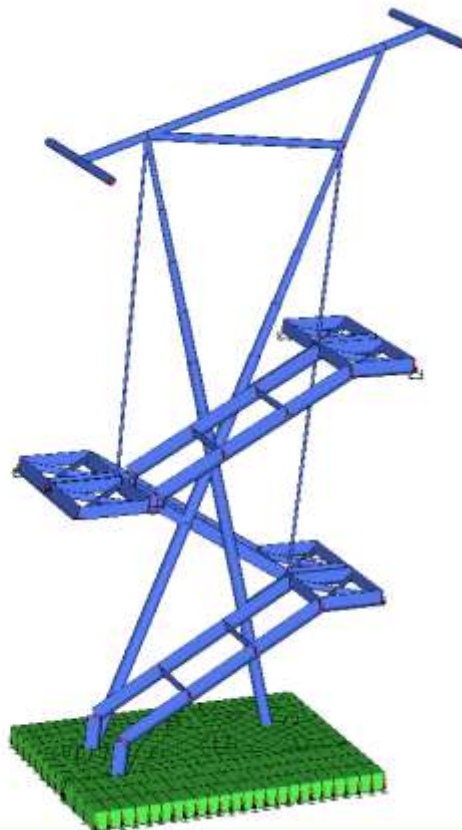
VISTE SOLIDE DEL MODELLO DI CALCOLO

Sezioni	
	1 P <sub>s</sub> L 200X 90X 10
	2 Cc D=0.18 s=0.01
	3 Cp D=0.036
	5 Rp B=0.01 H=0.1
	6 Cc D=0.16 s=0.01
	7 Cc D=0.14 s=0.01
	8 Cc D=0.12 s=0.01
	9 Cc D=0.1 s=0.01
	10 Cc D=0.08 s=0.01
	12 Rf B=0.1 H=0.15 s=0.005 r.est=0.0075 r.int=0.005



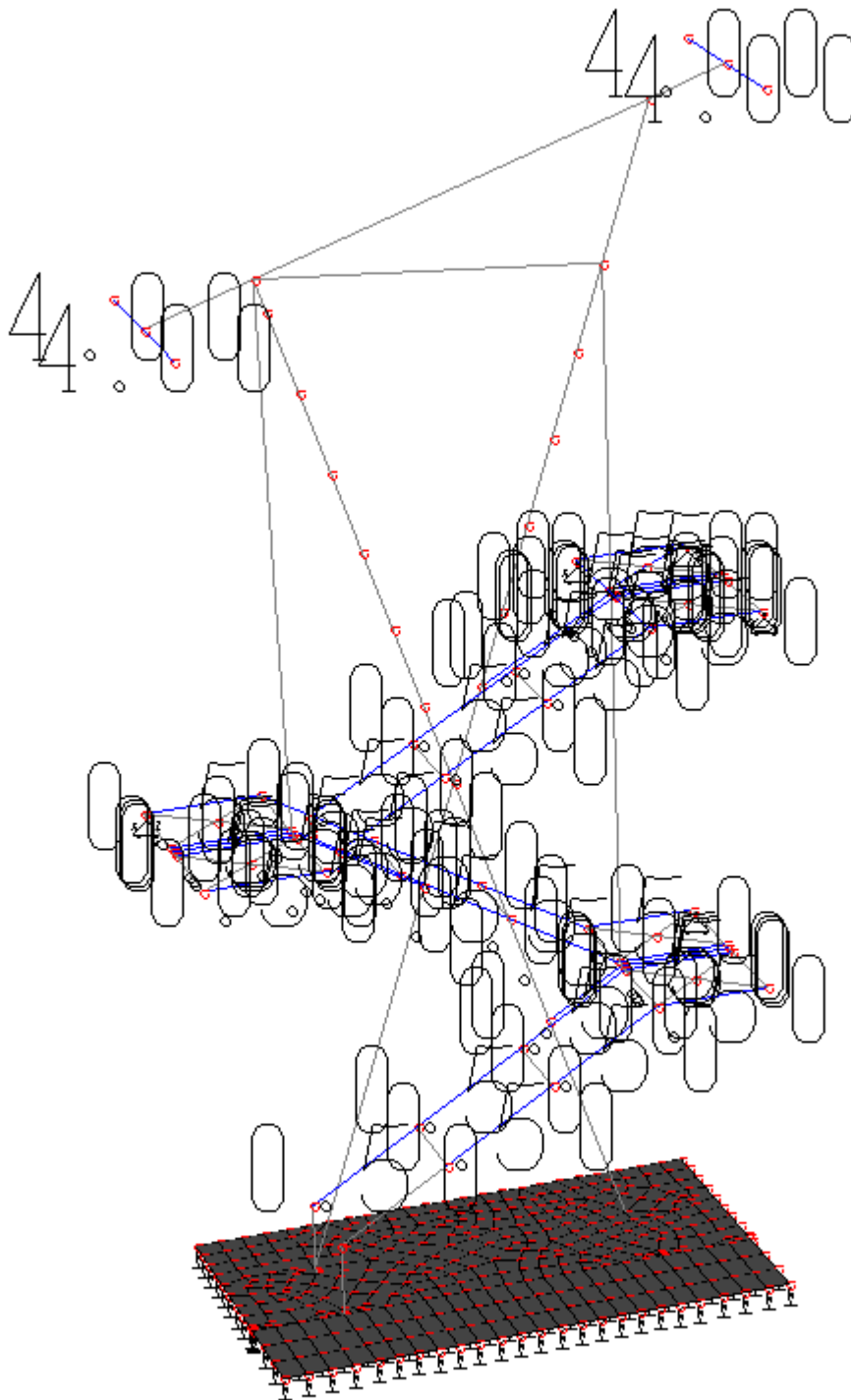
TIPOLOGIE DI TRAVI

Materiali	
	1 Acciaio
	2 Calcestruzzo C25/30 (Rck 300)

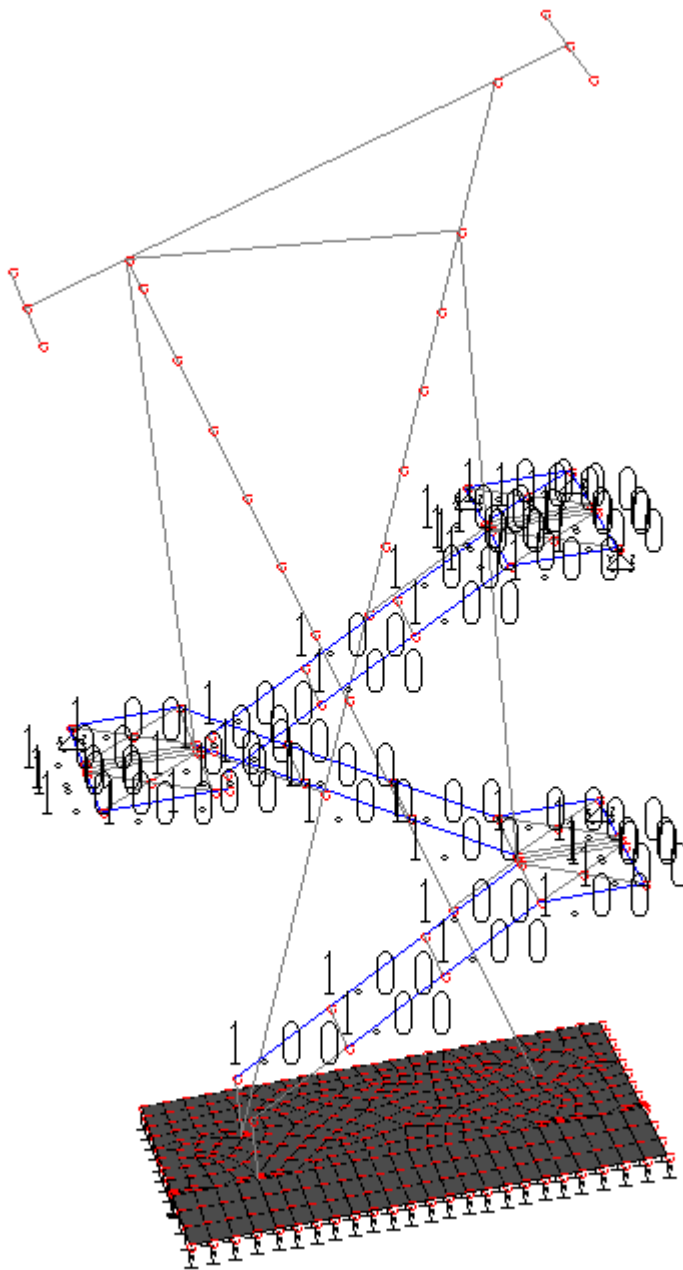


TIPOLOGIE MATERIALI

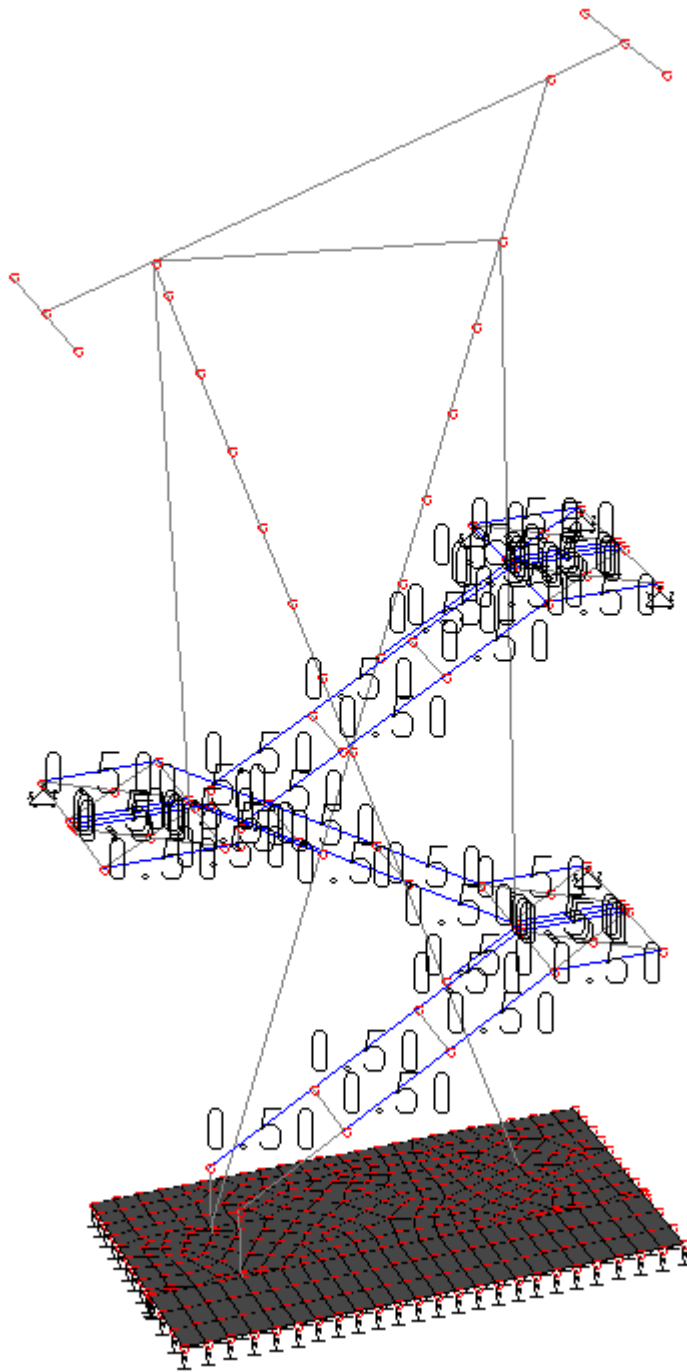
AREA INFLUENZA CARICO PERMANENTE STRUTTURALE SOLAIO PIANO PRIMO



AREA INFLUENZA CARICO PERMANENTE PORTATO

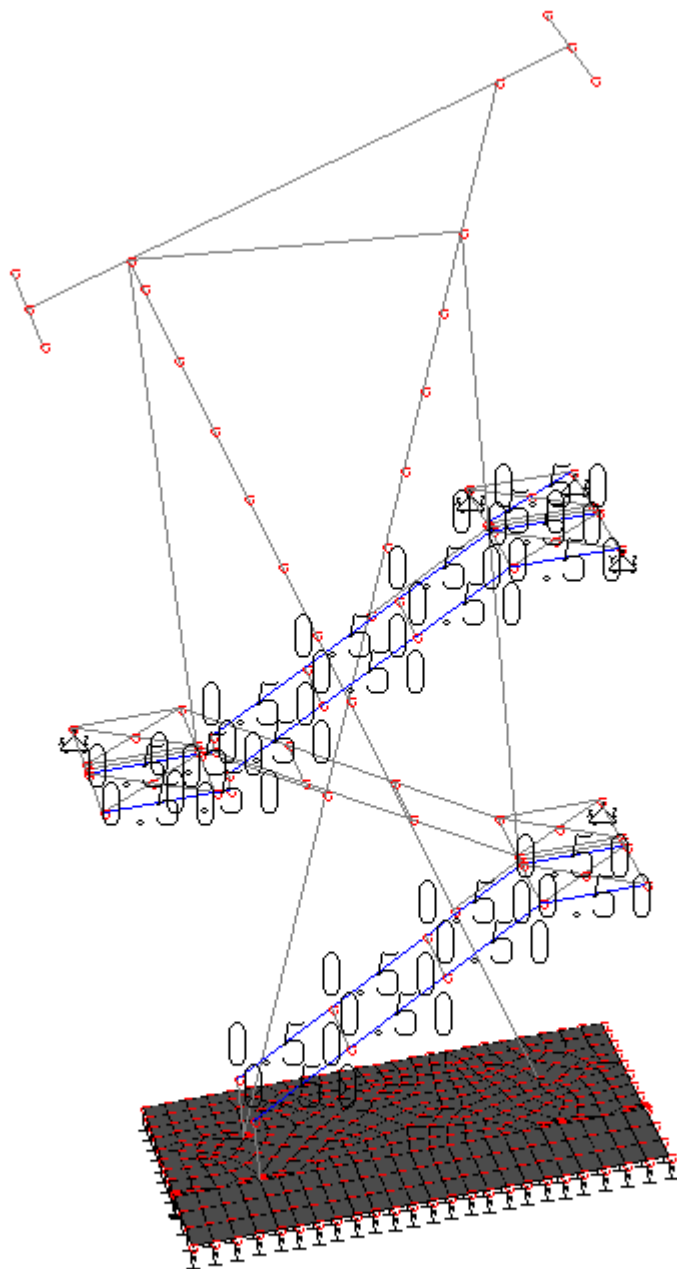


AREA INFLUENZA CARICO PERMANENTE PORTATO PARAPETTO

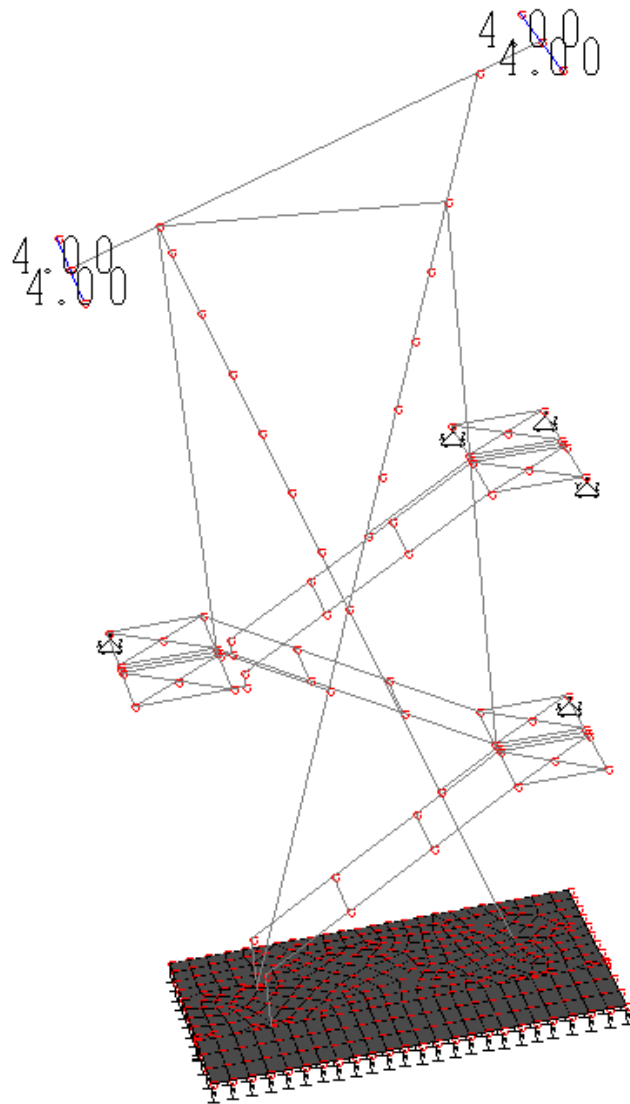


AREA INFLUENZA CARICO ACCIDENTALE





AREA INFLUENZA CARICO ACCIDENTALE ECCENTRICO



AREA INFLUENZA CARICO NEVE

### 2.1.6.2 REGOLARITA' IN PIANTA ED IN ALZATO

Le costruzioni devono avere, quanto più possibile, struttura iperstatica caratterizzata da regolarità in pianta e in altezza. Se necessario ciò può essere conseguito suddividendo la struttura, mediante giunti, in unità tra loro dinamicamente indipendenti.

Per quanto riguarda l'edificio in oggetto, la costruzione non è regolare in pianta in quanto non sono rispettate tutte le seguenti condizioni:

- a) la configurazione in pianta è compatta e approssimativamente simmetrica rispetto a due direzioni ortogonali, in relazione alla distribuzione di masse e *rigidezze; condizione rispettata*
- b) il rapporto tra i lati di un rettangolo in cui la costruzione risulta inscritta è inferiore a 4; *condizione rispettata infatti:*
- c) nessuna dimensione di eventuali rientri o sporgenze supera il 25 % della dimensione totale della costruzione nella corrispondente direzione; *condizione rispettata, non sono presenti sporgenze*
- d) gli orizzontamenti possono essere considerati infinitamente rigidi nel loro piano rispetto agli elementi verticali e sufficientemente resistenti; *condizione non rispettata.*

Sempre riferendosi agli edifici, una costruzione è regolare in altezza se tutte le seguenti condizioni sono rispettate:

- e) tutti i sistemi resistenti verticali (quali telai e pareti) si estendono per tutta l'altezza della costruzione; *condizione rispettata*
- f) massa e rigidezza rimangono costanti o variano gradualmente, senza bruschi cambiamenti, dalla base alla sommità della costruzione; *condizione non rispettata*
- g) nelle strutture intelaiate progettate in CD "B" il rapporto tra resistenza effettiva e resistenza richiesta dal calcolo non è significativamente diverso per orizzontamenti diversi (il rapporto fra la resistenza effettiva e quella richiesta, calcolata ad un generico orizzontamento, non deve differire più del 20% dall'analogo rapporto determinato per un altro orizzontamento); può fare eccezione l'ultimo orizzontamento di strutture intelaiate di almeno tre orizzontamenti;
- h) eventuali restringimenti della sezione orizzontale della costruzione avvengono in modo graduale da un orizzontamento al successivo, rispettando i seguenti limiti: ad ogni orizzontamento il rientro non supera il 30% della dimensione corrispondente al primo orizzontamento, né il 20% della dimensione corrispondente all'orizzontamento immediatamente sottostante. Fa eccezione l'ultimo orizzontamento di costruzioni di almeno quattro piani per il quale non sono previste limitazioni di restringimento.

**Per quanto sopra la struttura non è regolare in pianta e in elevazione.**

### 2.1.6.3 TIPOLOGIA STRUTTURALE

**Struttura con comportamento non dissipativo.**

### 2.1.6.4 FATTORE DI STRUTTURA

Per l'edificio in esame assunto un comportamento non dissipativo si impone :

$$q = 1$$

### 2.1.6.5 CLASSE DI DUTTILITA

Omissis

### 2.1.6.6 GIUNTI DI SEPARAZIONE FRA STRUTTURE CONTIGUE

La struttura è mantenuta è realizzata in aderenza all'esistente struttura in muratura. La realizzazione della scala vista la modesta rigidezza della stesa non muta il comportamento globale dell'edificio.

2.1.7 PUNTO G)

2.1.7.1 STATI LIMITE INDAGATI

**COMBINAZIONI PER LE VERIFICHE ALLO STATO LIMITE ULTIMO**

Num.	Descrizione	Parametri	Tipo azione/categoria	Condizione	Moltiplicatore
1	Dinamica	Azione sismica: Presente	Permanente: Peso Proprio	Condizione peso proprio	1.000
			Permanente: Permanente portato	Condizione 2	1.000
			Permanente: Permanente portato	Condizione 6	1.000
			Variabile: Aree di acquisto e congresso	Condizione 1	0.600
			Variabile: Aree di acquisto e congresso	Condizione 3	0.000
			Variabile: Aree di acquisto e congresso	Condizione 4	0.000
2	Statica	Azione sismica: Sisma assente	Permanente: Peso Proprio	Condizione peso proprio	1.300
			Permanente: Permanente portato	Condizione 2	1.300
			Variabile: Aree di acquisto e congresso	Condizione 1	1.500
			Variabile: Aree di acquisto e congresso	Condizione 3	0.000
			Variabile: Aree di acquisto e congresso	Condizione 4	0.000
			Variabile: Neve	Condizione 5	0.750
7	Statica eccentrica	Azione sismica: Sisma assente	Permanente: Peso Proprio	Condizione peso proprio	1.300
			Permanente: Permanente portato	Condizione 2	1.300
			Variabile: Aree di acquisto e congresso	Condizione 1	0.000
			Variabile: Aree di acquisto e congresso	Condizione 3	1.500
			Variabile: Aree di acquisto e congresso	Condizione 4	0.000
			Variabile: Neve	Condizione 5	1.500

**COMBINAZIONI PER LE VERIFICHE ALLO STATO LIMITE D'ESERCIZIO**

Num.	Descrizione	Parametri	Tipo azione/categoria	Condizione	Moltiplicatore
3	Rara	Tipologia: Rara	Permanente: Peso Proprio	Condizione peso proprio	1.000
			Permanente: Permanente portato	Condizione 2	1.000
			Variabile: Aree di acquisto e congresso	Condizione 1	1.000
			Variabile: Aree di acquisto e congresso	Condizione 3	0.000
			Variabile: Aree di acquisto e congresso	Condizione 4	0.000
			Variabile: Neve	Condizione 5	0.500
4	Frequente	Tipologia: Frequente	Permanente: Peso Proprio	Condizione peso proprio	1.000
			Permanente: Permanente portato	Condizione 2	1.000
			Variabile: Aree di acquisto e congresso	Condizione 1	0.700
			Variabile: Aree di acquisto e congresso	Condizione 3	0.000
			Variabile: Aree di acquisto e congresso	Condizione 4	0.000
			Variabile: Neve	Condizione 5	0.200
5	Quasi permanente	Tipologia: Quasi permanente	Permanente: Peso Proprio	Condizione peso proprio	1.000
			Permanente: Permanente portato	Condizione 2	1.000
			Variabile: Aree di acquisto e congresso	Condizione 1	0.600
			Variabile: Aree di acquisto e congresso	Condizione 3	0.000
			Variabile: Aree di acquisto e congresso	Condizione 4	0.000
8	Rara eccentrica	Tipologia: Rara	Permanente: Peso Proprio	Condizione peso proprio	1.000
			Permanente: Permanente portato	Condizione 2	1.000
			Variabile: Aree di acquisto e congresso	Condizione 1	0.000
			Variabile: Aree di acquisto e congresso	Condizione 3	1.000
			Variabile: Aree di acquisto e congresso	Condizione 4	0.000
			Variabile: Neve	Condizione 5	0.500
9	Frequente eccentrica	Tipologia: Frequente	Permanente: Peso Proprio	Condizione peso proprio	1.000
			Permanente: Permanente portato	Condizione 2	1.000
			Variabile: Aree di acquisto e congresso	Condizione 1	0.000
			Variabile: Aree di acquisto e congresso	Condizione 3	0.700
			Variabile: Aree di acquisto e congresso	Condizione 4	0.000
10	Quasi permanente eccentrica	Tipologia: Quasi permanente	Permanente: Peso Proprio	Condizione peso proprio	1.000
			Permanente: Permanente portato	Condizione 2	1.000
			Variabile: Aree di acquisto e congresso	Condizione 1	0.000
			Variabile: Aree di acquisto e congresso	Condizione 3	0.600
			Variabile: Aree di acquisto e congresso	Condizione 4	0.000

## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Num.	Descrizione	Parametri	Tipo azione/categoria	Condizione	Moltiplicatore
11	tiro	Tipologia: Rara	Permanente: Permanente portato	Condizione 6	1.000

### COMBINAZIONI PER LE VERIFICHE ALLO STATO LIMITE DI DANNO

Num.	Descrizione	Parametri	Tipo azione/categoria	Condizione	Moltiplicatore
6	S.L.D.	Azione sismica: Presente	Permanente: Peso Proprio	Condizione peso proprio	1.000
			Permanente: Permanente portato	Condizione 2	1.000
			Variabile: Aree di acquisto e congresso	Condizione 1	0.600
			Variabile: Aree di acquisto e congresso	Condizione 3	0.600
			Variabile: Aree di acquisto e congresso	Condizione 4	0.600



2.1.8 PUNTO H)

2.1.8.1 INDICAZIONE DEL METODO DI ANALISI SEGUITO

Al fine di eseguire le dovute verifiche nei riguardi dell'edificio in questione, si è deciso di procedere con l'esecuzione di una analisi dinamica modale.

2.1.8.2 CONTROLLO ANALISI DEL SECONDO ORDINE

```

Nome archivio di lavoro      : Scala blocco 10
Intestazione del lavoro     : Scala
Tipo di analisi             : Statica e Dinamica
Unita' di misura delle Forze : kN
Unita' di misura Lunghezze  : m
Sisma lungo l'asse Z       : No
Combinazione dei modi      : CQC
Combinazione componenti azioni sismiche : Eurocodice 8
λ                            : 0.3
μ                            : 0.3
    
```

\*\*\* Gruppo di copertura: colonne

C.C	Δ_X [cm]	Δ_Y [cm]
1 Statica+(EX+λ*EY)	0.35	1.57
1 Statica+(λ*EX+EY)	0.13	4.03
2	0.10	0.02
3	0.07	0.01
4	0.04	0.01
5	0.01	0.01
7	0.21	0.02
8	0.08	0.01
9	0.02	0.01
10	0.02	0.01

\*\*\* Gruppo di copertura: travi

C.C	Δ_X [cm]	Δ_Y [cm]
1 Statica+(EX+λ*EY)	0.82	2.62
1 Statica+(λ*EX+EY)	0.38	6.35
2	0.28	-0.10
3	0.19	-0.07
4	0.11	-0.06
5	0.06	-0.05
7	0.53	-0.19
8	0.22	-0.13
9	0.07	-0.10
10	0.07	-0.09

\*\*\* analisi alla quota: 0.000

Gruppo di copertura: colonne altezza interpiano: 6.77  
 Gruppo di copertura: travi altezza interpiano: 10.00  
 altezza media di interpiano: 8.38

C.C	Δ_X [cm]	Δ_Y [cm]	d <sub>rx</sub> [cm]	d <sub>ry</sub> [cm]	FX	FY	FZ	9_X	9_Y
1 Statica+(EX+λ*EY)	0.00	0.00	-0.59	-2.10	19.29	13.04	15.26	0.00	0.00
1 Statica+(λ*EX+EY)	0.00	0.00	-0.26	-5.19	7.83	27.41	15.26	0.00	0.00
2	0.00	0.00	-0.19	0.04	40.95	0.32	28.81	0.00	0.00
3	0.00	0.00	-0.13	0.03	29.20	0.22	20.17	0.00	0.00
4	0.00	0.00	-0.08	0.02	24.19	0.19	16.43	0.00	0.00
5	0.00	0.00	-0.04	0.02	22.16	0.18	15.26	0.00	0.00
7	0.00	0.00	-0.37	0.09	32.87	0.14	19.42	0.00	0.00
8	0.00	0.00	-0.15	0.06	22.03	0.11	14.32	0.00	0.00
9	0.00	0.00	-0.05	0.05	18.46	0.11	12.50	0.00	0.00
10	0.00	0.00	-0.05	0.04	17.86	0.11	11.75	0.00	0.00

CONTROLLO REGOLARITÀ DELLA VARIAZIONE DELLA RIGIDEZZA LATERALE IN ALTEZZA

	Quota [m]	Rigidezza laterale X [KN/cm]	Variazione [%]	Rigidezza laterale Y [KN/cm]	Variazione [%]
Livello 0	0.00	243.99	---	6.55	---

RIPARTIZIONE DELLE AZIONI TAGLIANTI AI PIANI

\*\*\* Piano rigido alla quota: 0.000

C.C	FX(Tot)	FX(Pil.) (%)	FX(Setti) (%)	FX(Pareti) (%)	FY(Tot)	FY(Pil.) (%)	FY(Setti) (%)	FY(Pareti) (%)
1 Statica+(EX+λ*EY)	19	19 100	0 0	0 0	13	13 100	0 0	0 0
1 Statica+(λ*EX+EY)	8	8 100	0 0	0 0	27	27 100	0 0	0 0

2.1.8.3 INDICAZIONI ANALISI MODALE

I modi analizzati sono stati 100 in modo di eccettare sempre una massa pari al'85% in direzione X e Y.

**FREQUENZE PROPRIE DI OSCILLAZIONE**

Numero	Pulsazione	Frequenza	Periodo	Precisione
1	7.069e+000	1.125e+000	8.888e-001	0.000e+000
2	9.122e+000	1.452e+000	6.888e-001	0.000e+000
3	1.893e+001	3.012e+000	3.320e-001	0.000e+000
4	3.053e+001	4.859e+000	2.058e-001	0.000e+000
5	3.332e+001	5.304e+000	1.885e-001	0.000e+000
6	3.622e+001	5.764e+000	1.735e-001	0.000e+000
7	3.684e+001	5.864e+000	1.705e-001	0.000e+000
8	4.121e+001	6.559e+000	1.525e-001	0.000e+000
9	4.884e+001	7.774e+000	1.286e-001	4.845e-284
10	4.940e+001	7.862e+000	1.272e-001	1.609e-282
11	5.238e+001	8.336e+000	1.200e-001	3.003e-273
12	5.318e+001	8.464e+000	1.182e-001	4.452e-273
13	5.598e+001	8.909e+000	1.122e-001	3.752e-266
14	5.822e+001	9.266e+000	1.079e-001	2.211e-262
15	6.177e+001	9.831e+000	1.017e-001	2.393e-254
16	6.274e+001	9.986e+000	1.001e-001	6.491e-252
17	6.477e+001	1.031e+001	9.700e-002	3.705e-248
18	6.880e+001	1.095e+001	9.132e-002	1.573e-242
19	7.237e+001	1.152e+001	8.682e-002	1.199e-236
20	7.995e+001	1.272e+001	7.859e-002	1.380e-225
21	8.316e+001	1.324e+001	7.555e-002	5.854e-221
22	8.998e+001	1.432e+001	6.983e-002	4.820e-211
23	9.229e+001	1.469e+001	6.808e-002	1.320e-206
24	9.367e+001	1.491e+001	6.708e-002	4.082e-205
25	9.667e+001	1.539e+001	6.499e-002	3.202e-201
26	9.879e+001	1.572e+001	6.360e-002	9.763e-200
27	1.052e+002	1.674e+001	5.975e-002	1.871e-192
28	1.068e+002	1.699e+001	5.886e-002	3.619e-191
29	1.104e+002	1.757e+001	5.692e-002	2.976e-187
30	1.155e+002	1.838e+001	5.441e-002	9.904e-182
31	1.168e+002	1.860e+001	5.378e-002	2.009e-181
32	1.189e+002	1.893e+001	5.283e-002	3.739e-178
33	1.212e+002	1.929e+001	5.185e-002	2.035e-178
34	1.277e+002	2.033e+001	4.919e-002	5.316e-174
35	1.387e+002	2.208e+001	4.528e-002	1.112e-165
36	1.406e+002	2.238e+001	4.468e-002	1.851e-164
37	1.531e+002	2.437e+001	4.103e-002	1.275e-156
38	1.631e+002	2.595e+001	3.853e-002	3.210e-149
39	1.645e+002	2.618e+001	3.820e-002	1.187e-147
40	1.762e+002	2.805e+001	3.566e-002	1.225e-141
41	1.782e+002	2.835e+001	3.527e-002	1.274e-140
42	1.926e+002	3.065e+001	3.263e-002	1.209e-133
43	1.995e+002	3.176e+001	3.149e-002	9.945e-130
44	2.134e+002	3.396e+001	2.945e-002	3.104e-122
45	2.192e+002	3.489e+001	2.866e-002	1.146e-117
46	2.197e+002	3.497e+001	2.859e-002	1.128e-117
47	2.358e+002	3.754e+001	2.664e-002	6.915e-112
48	2.409e+002	3.834e+001	2.609e-002	1.946e-108
49	2.418e+002	3.849e+001	2.598e-002	2.939e-107
50	2.465e+002	3.924e+001	2.549e-002	1.502e-106
51	2.568e+002	4.087e+001	2.447e-002	8.150e-103
52	2.589e+002	4.120e+001	2.427e-002	4.054e-102
53	2.647e+002	4.213e+001	2.373e-002	5.122e-100
54	2.726e+002	4.339e+001	2.305e-002	5.539e-098
55	2.796e+002	4.451e+001	2.247e-002	2.040e-095
56	2.859e+002	4.550e+001	2.198e-002	1.864e-093

## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Numero	Pulsazione	Frequenza	Periodo	Precisione
57	2.897e+002	4.611e+001	2.169e-002	5.184e-093
58	3.023e+002	4.811e+001	2.079e-002	2.051e-087
59	3.072e+002	4.889e+001	2.045e-002	4.120e-087
60	3.124e+002	4.973e+001	2.011e-002	6.637e-085
61	3.153e+002	5.019e+001	1.993e-002	4.753e-085
62	3.201e+002	5.095e+001	1.963e-002	6.991e-084
63	3.255e+002	5.181e+001	1.930e-002	5.223e-082
64	3.332e+002	5.304e+001	1.886e-002	1.345e-081
65	3.342e+002	5.319e+001	1.880e-002	1.086e-081
66	3.543e+002	5.638e+001	1.774e-002	1.090e-079
67	3.822e+002	6.083e+001	1.644e-002	9.514e-075
68	3.959e+002	6.301e+001	1.587e-002	2.274e-069
69	3.977e+002	6.329e+001	1.580e-002	1.507e-069
70	4.024e+002	6.404e+001	1.562e-002	7.817e-070
71	4.138e+002	6.585e+001	1.519e-002	8.073e-068
72	4.246e+002	6.758e+001	1.480e-002	1.282e-066
73	4.299e+002	6.842e+001	1.462e-002	8.985e-065
74	4.352e+002	6.927e+001	1.444e-002	1.234e-065
75	4.431e+002	7.053e+001	1.418e-002	2.567e-065
76	4.780e+002	7.608e+001	1.314e-002	4.123e-063
77	5.271e+002	8.389e+001	1.192e-002	7.199e-057
78	5.577e+002	8.877e+001	1.127e-002	2.247e-052
79	5.642e+002	8.979e+001	1.114e-002	6.821e-052
80	5.801e+002	9.232e+001	1.083e-002	5.484e-051
81	6.433e+002	1.024e+002	9.768e-003	6.011e-045
82	6.686e+002	1.064e+002	9.398e-003	4.341e-041
83	7.192e+002	1.145e+002	8.737e-003	4.277e-036
84	7.360e+002	1.171e+002	8.537e-003	2.677e-033
85	7.571e+002	1.205e+002	8.299e-003	1.762e-031
86	7.658e+002	1.219e+002	8.205e-003	3.600e-030
87	7.783e+002	1.239e+002	8.073e-003	1.144e-028
88	8.070e+002	1.284e+002	7.786e-003	1.973e-026
89	8.212e+002	1.307e+002	7.651e-003	6.745e-025
90	8.377e+002	1.333e+002	7.500e-003	2.401e-023
91	8.450e+002	1.345e+002	7.436e-003	3.014e-022
92	8.475e+002	1.349e+002	7.413e-003	6.199e-022
93	8.689e+002	1.383e+002	7.231e-003	3.869e-022
94	9.198e+002	1.464e+002	6.831e-003	1.665e-018
95	9.245e+002	1.471e+002	6.796e-003	7.676e-018
96	9.546e+002	1.519e+002	6.582e-003	3.468e-016
97	9.655e+002	1.537e+002	6.507e-003	3.560e-015
98	9.761e+002	1.554e+002	6.437e-003	1.955e-014
99	9.907e+002	1.577e+002	6.342e-003	3.241e-014
100	1.018e+003	1.621e+002	6.170e-003	1.110e-011

### COEFFICIENTI DI PARTECIPAZIONE MODALE

Modo	Direz.X	Direz.Y
1	-4.552e-003	7.789e-001
2	-4.491e-004	-5.074e-001
3	1.854e-002	-2.049e-001
4	7.011e-002	1.260e+000
5	-2.464e-001	-1.731e+000
6	-3.263e-001	1.505e-001
7	-4.373e-001	4.227e-001
8	-2.300e-001	-1.608e-001
9	3.669e-001	5.863e-001
10	2.117e-002	-1.145e-001
11	-7.752e-001	8.714e-001
12	2.251e-001	-2.068e-001
13	1.421e-001	-7.887e-002
14	-5.143e-001	7.945e-002
15	-3.841e-001	-2.587e-003
16	-6.516e-001	-2.668e-002

## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Modo	Direz.X	Direz.Y
17	-8.777e-001	-6.499e-002
18	-1.491e+000	-3.708e-002
19	5.656e-001	-1.933e-001
20	7.117e-002	3.793e-003
21	-5.043e-001	9.319e-002
22	2.432e-001	-1.851e-001
23	3.803e-002	-2.837e-002
24	-7.236e-002	-3.060e-001
25	8.781e-001	1.091e-001
26	-1.103e-001	6.102e-002
27	4.734e-001	1.034e-001
28	-4.702e-001	-3.525e-001
29	-1.776e-002	-2.441e-001
30	-2.502e-001	-4.989e-001
31	1.261e+000	6.665e-002
32	1.260e-002	1.434e-002
33	5.813e-001	1.165e-001
34	-5.426e-001	5.030e-001
35	-3.049e-001	-1.084e-001
36	-6.865e-001	3.988e-001
37	1.391e-001	1.147e-002
38	-1.420e-001	-1.958e-001
39	-2.453e-003	5.625e-002
40	-5.676e-002	1.434e-001
41	-1.240e-002	-2.917e-001
42	-3.132e-001	5.097e-002
43	-9.934e-002	-5.858e-004
44	4.171e-001	-2.730e-002
45	7.697e-002	-1.479e-002
46	-1.719e-001	3.094e-002
47	2.385e-001	1.050e-001
48	-8.551e-002	-6.842e-002
49	-1.180e-002	1.107e-002
50	2.477e-001	3.516e-002
51	5.819e-001	2.805e-001
52	-3.753e-001	-6.731e-002
53	-6.126e-001	-2.364e-001
54	-1.260e-001	-3.081e-002
55	-1.199e-001	-1.032e-002
56	-1.132e-001	-8.677e-003
57	-2.202e-001	3.840e-002
58	4.372e-002	-1.966e-001
59	-7.834e-002	-2.224e-003
60	1.131e-002	2.636e-003
61	-8.245e-002	1.542e-001
62	3.951e-002	-9.292e-002
63	-2.273e-001	5.209e-001
64	1.485e-001	2.609e-001
65	-3.254e-001	1.325e-001
66	6.248e-002	9.760e-002
67	8.725e-001	4.671e-001
68	1.360e-001	-1.987e-001
69	-1.092e-001	1.889e-002
70	-2.025e-002	-4.548e-003
71	2.129e-003	-1.480e-001
72	-4.267e-001	-1.149e-002
73	-7.989e-002	-7.286e-002
74	-5.262e-002	-2.033e-001
75	-3.989e-001	8.608e-001
76	-5.651e-001	-2.057e-001
77	-2.783e-001	5.360e-001
78	1.083e-002	6.292e-002
79	-1.928e-002	1.874e-002

## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Modo	Direz.X	Direz.Y
80	-1.270e-001	-5.532e-001
81	-2.227e-001	1.277e+000
82	-4.623e-001	1.037e-001
83	9.762e-002	-1.173e-001
84	7.646e-002	-1.556e-001
85	9.721e-002	1.277e-001
86	1.923e-002	1.363e-002
87	-2.056e-002	-5.488e-003
88	9.405e-002	7.888e-002
89	1.206e-001	4.808e-002
90	2.298e-001	3.769e-001
91	2.492e-001	5.047e-001
92	2.949e-002	1.022e-001
93	1.578e-002	3.469e-002
94	-3.817e-002	3.733e-002
95	-1.245e-001	2.935e-001
96	-1.369e-001	-4.145e-001
97	-6.486e-002	1.214e-001
98	-6.197e-002	-2.058e-001
99	-1.283e-004	-3.226e-003
100	1.365e-003	3.486e-003

### MASSA ECCITATA PER QUOTA Z MAGGIORE DI :0.00

Modo	Direz.X	%	Direz.Y	%	Direz.Z	%
Modo: 1	+2.07e-005	0	+6.07e-001	4	+1.83e-004	0
Progressiva	+2.07e-005	0	+6.07e-001	4	+1.83e-004	0
Modo: 2	+2.02e-007	0	+2.57e-001	2	+7.28e-007	0
Progressiva	+2.09e-005	0	+8.64e-001	6	+1.83e-004	0
Modo: 3	+3.44e-004	0	+4.20e-002	0	+2.32e-001	2
Progressiva	+3.65e-004	0	+9.06e-001	6	+2.32e-001	2
Modo: 4	+4.92e-003	0	+1.59e+000	11	+3.75e-002	0
Progressiva	+5.28e-003	0	+2.49e+000	17	+2.69e-001	2
Modo: 5	+6.07e-002	0	+3.00e+000	21	+4.02e-003	0
Progressiva	+6.60e-002	0	+5.49e+000	38	+2.73e-001	2
Modo: 6	+1.06e-001	1	+2.27e-002	0	+2.85e-002	0
Progressiva	+1.72e-001	1	+5.51e+000	38	+3.02e-001	2
Modo: 7	+1.91e-001	1	+1.79e-001	1	+6.10e-002	0
Progressiva	+3.64e-001	3	+5.69e+000	40	+3.63e-001	3
Modo: 8	+5.29e-002	0	+2.58e-002	0	+1.11e+000	8
Progressiva	+4.17e-001	3	+5.72e+000	40	+1.47e+000	10
Modo: 9	+1.35e-001	1	+3.44e-001	2	+1.83e+000	13
Progressiva	+5.51e-001	4	+6.06e+000	42	+3.30e+000	23
Modo: 10	+4.48e-004	0	+1.31e-002	0	+1.26e-003	0
Progressiva	+5.52e-001	4	+6.07e+000	42	+3.30e+000	23
Modo: 11	+6.01e-001	4	+7.59e-001	5	+7.13e-001	5
Progressiva	+1.15e+000	8	+6.83e+000	48	+4.02e+000	28
Modo: 12	+5.07e-002	0	+4.27e-002	0	+3.43e-001	2
Progressiva	+1.20e+000	8	+6.88e+000	48	+4.36e+000	30
Modo: 13	+2.02e-002	0	+6.22e-003	0	+1.43e-001	1
Progressiva	+1.22e+000	9	+6.88e+000	48	+4.50e+000	31
Modo: 14	+2.64e-001	2	+6.31e-003	0	+3.27e+000	23
Progressiva	+1.49e+000	10	+6.89e+000	48	+7.77e+000	54
Modo: 15	+1.48e-001	1	+6.69e-006	0	+7.19e-001	5
Progressiva	+1.64e+000	11	+6.89e+000	48	+8.49e+000	59
Modo: 16	+4.25e-001	3	+7.12e-004	0	+2.33e-002	0
Progressiva	+2.06e+000	14	+6.89e+000	48	+8.52e+000	59
Modo: 17	+7.70e-001	5	+4.22e-003	0	+2.55e-001	2
Progressiva	+2.83e+000	20	+6.89e+000	48	+8.77e+000	61
Modo: 18	+2.22e+000	15	+1.38e-003	0	+9.55e-001	7
Progressiva	+5.05e+000	35	+6.89e+000	48	+9.73e+000	68
Modo: 19	+3.20e-001	2	+3.74e-002	0	+1.67e-001	1
Progressiva	+5.37e+000	37	+6.93e+000	48	+9.89e+000	69
Modo: 20	+5.06e-003	0	+1.44e-005	0	+4.49e-003	0

## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Modo	Direz.X	%	Direz.Y	%	Direz.Z	%
Progressiva	+5.38e+000	37	+6.93e+000	48	+9.90e+000	69
Modo: 21	+2.54e-001	2	+8.68e-003	0	+4.45e-001	3
Progressiva	+5.63e+000	39	+6.94e+000	48	+1.03e+001	72
Modo: 22	+5.91e-002	0	+3.42e-002	0	+1.23e+000	9
Progressiva	+5.69e+000	40	+6.97e+000	49	+1.16e+001	81
Modo: 23	+1.45e-003	0	+8.05e-004	0	+1.15e-002	0
Progressiva	+5.69e+000	40	+6.98e+000	49	+1.16e+001	81
Modo: 24	+5.24e-003	0	+9.36e-002	1	+1.30e-002	0
Progressiva	+5.70e+000	40	+7.07e+000	49	+1.16e+001	81
Modo: 25	+7.71e-001	5	+1.19e-002	0	+1.55e-003	0
Progressiva	+6.47e+000	45	+7.08e+000	49	+1.16e+001	81
Modo: 26	+1.22e-002	0	+3.72e-003	0	+9.39e-002	1
Progressiva	+6.48e+000	45	+7.08e+000	49	+1.17e+001	81
Modo: 27	+2.24e-001	2	+1.07e-002	0	+2.74e-001	2
Progressiva	+6.71e+000	47	+7.10e+000	49	+1.20e+001	83
Modo: 28	+2.21e-001	2	+1.24e-001	1	+2.00e-002	0
Progressiva	+6.93e+000	48	+7.22e+000	50	+1.20e+001	83
Modo: 29	+3.16e-004	0	+5.96e-002	0	+1.71e-001	1
Progressiva	+6.93e+000	48	+7.28e+000	51	+1.22e+001	85
Modo: 30	+6.26e-002	0	+2.49e-001	2	+1.93e-002	0
Progressiva	+6.99e+000	49	+7.53e+000	52	+1.22e+001	85
Modo: 31	+1.59e+000	11	+4.44e-003	0	+2.79e-001	2
Progressiva	+8.58e+000	60	+7.53e+000	52	+1.25e+001	87
Modo: 32	+1.59e-004	0	+2.06e-004	0	+2.99e-005	0
Progressiva	+8.58e+000	60	+7.53e+000	52	+1.25e+001	87
Modo: 33	+3.38e-001	2	+1.36e-002	0	+1.31e-001	1
Progressiva	+8.92e+000	62	+7.55e+000	53	+1.26e+001	88
Modo: 34	+2.94e-001	2	+2.53e-001	2	+1.11e-001	1
Progressiva	+9.21e+000	64	+7.80e+000	54	+1.27e+001	88
Modo: 35	+9.30e-002	1	+1.18e-002	0	+1.99e-002	0
Progressiva	+9.31e+000	65	+7.81e+000	54	+1.27e+001	89
Modo: 36	+4.71e-001	3	+1.59e-001	1	+2.63e-001	2
Progressiva	+9.78e+000	68	+7.97e+000	55	+1.30e+001	90
Modo: 37	+1.93e-002	0	+1.32e-004	0	+1.74e-003	0
Progressiva	+9.80e+000	68	+7.97e+000	55	+1.30e+001	90
Modo: 38	+2.02e-002	0	+3.83e-002	0	+2.15e-003	0
Progressiva	+9.82e+000	68	+8.01e+000	56	+1.30e+001	90
Modo: 39	+6.02e-006	0	+3.16e-003	0	+7.11e-003	0
Progressiva	+9.82e+000	68	+8.01e+000	56	+1.30e+001	90
Modo: 40	+3.22e-003	0	+2.06e-002	0	+1.29e-001	1
Progressiva	+9.82e+000	68	+8.03e+000	56	+1.31e+001	91
Modo: 41	+1.54e-004	0	+8.51e-002	1	+3.45e-006	0
Progressiva	+9.82e+000	68	+8.12e+000	56	+1.31e+001	91
Modo: 42	+9.81e-002	1	+2.60e-003	0	+2.09e-002	0
Progressiva	+9.92e+000	69	+8.12e+000	56	+1.31e+001	91
Modo: 43	+9.87e-003	0	+3.43e-007	0	+4.36e-003	0
Progressiva	+9.93e+000	69	+8.12e+000	56	+1.32e+001	91
Modo: 44	+1.74e-001	1	+7.45e-004	0	+6.73e-003	0
Progressiva	+1.01e+001	70	+8.12e+000	56	+1.32e+001	92
Modo: 45	+5.92e-003	0	+2.19e-004	0	+1.88e-002	0
Progressiva	+1.01e+001	70	+8.12e+000	57	+1.32e+001	92
Modo: 46	+2.96e-002	0	+9.57e-004	0	+5.50e-002	0
Progressiva	+1.01e+001	71	+8.12e+000	57	+1.32e+001	92
Modo: 47	+5.69e-002	0	+1.10e-002	0	+3.32e-002	0
Progressiva	+1.02e+001	71	+8.13e+000	57	+1.33e+001	92
Modo: 48	+7.31e-003	0	+4.68e-003	0	+1.71e-002	0
Progressiva	+1.02e+001	71	+8.14e+000	57	+1.33e+001	92
Modo: 49	+1.39e-004	0	+1.23e-004	0	+1.61e-004	0
Progressiva	+1.02e+001	71	+8.14e+000	57	+1.33e+001	92
Modo: 50	+6.14e-002	0	+1.24e-003	0	+1.57e-004	0
Progressiva	+1.03e+001	71	+8.14e+000	57	+1.33e+001	92
Modo: 51	+3.39e-001	2	+7.87e-002	1	+6.13e-006	0
Progressiva	+1.06e+001	74	+8.22e+000	57	+1.33e+001	92



## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Modo	Direz.X	%	Direz.Y	%	Direz.Z	%
Modo: 52	+1.41e-001	1	+4.53e-003	0	+5.06e-005	0
Progressiva	+1.07e+001	75	+8.22e+000	57	+1.33e+001	92
Modo: 53	+3.75e-001	3	+5.59e-002	0	+2.87e-003	0
Progressiva	+1.11e+001	77	+8.28e+000	58	+1.33e+001	92
Modo: 54	+1.59e-002	0	+9.50e-004	0	+2.92e-004	0
Progressiva	+1.11e+001	77	+8.28e+000	58	+1.33e+001	92
Modo: 55	+1.44e-002	0	+1.07e-004	0	+8.24e-003	0
Progressiva	+1.11e+001	78	+8.28e+000	58	+1.33e+001	92
Modo: 56	+1.28e-002	0	+7.53e-005	0	+4.21e-002	0
Progressiva	+1.12e+001	78	+8.28e+000	58	+1.33e+001	93
Modo: 57	+4.85e-002	0	+1.47e-003	0	+1.05e-003	0
Progressiva	+1.12e+001	78	+8.28e+000	58	+1.33e+001	93
Modo: 58	+1.91e-003	0	+3.86e-002	0	+5.39e-003	0
Progressiva	+1.12e+001	78	+8.32e+000	58	+1.33e+001	93
Modo: 59	+6.14e-003	0	+4.95e-006	0	+6.30e-005	0
Progressiva	+1.12e+001	78	+8.32e+000	58	+1.33e+001	93
Modo: 60	+1.28e-004	0	+6.95e-006	0	+2.06e-004	0
Progressiva	+1.12e+001	78	+8.32e+000	58	+1.33e+001	93
Modo: 61	+6.80e-003	0	+2.38e-002	0	+7.02e-006	0
Progressiva	+1.12e+001	78	+8.34e+000	58	+1.33e+001	93
Modo: 62	+1.56e-003	0	+8.63e-003	0	+5.04e-005	0
Progressiva	+1.12e+001	78	+8.35e+000	58	+1.33e+001	93
Modo: 63	+5.17e-002	0	+2.71e-001	2	+2.91e-003	0
Progressiva	+1.13e+001	78	+8.62e+000	60	+1.33e+001	93
Modo: 64	+2.21e-002	0	+6.80e-002	0	+1.24e-001	1
Progressiva	+1.13e+001	79	+8.69e+000	60	+1.35e+001	94
Modo: 65	+1.06e-001	1	+1.76e-002	0	+1.22e-001	1
Progressiva	+1.14e+001	79	+8.71e+000	61	+1.36e+001	95
Modo: 66	+3.90e-003	0	+9.53e-003	0	+1.11e-003	0
Progressiva	+1.14e+001	79	+8.72e+000	61	+1.36e+001	95
Modo: 67	+7.61e-001	5	+2.18e-001	2	+2.05e-003	0
Progressiva	+1.22e+001	85	+8.94e+000	62	+1.36e+001	95
Modo: 68	+1.85e-002	0	+3.95e-002	0	+3.24e-005	0
Progressiva	+1.22e+001	85	+8.98e+000	62	+1.36e+001	95
Modo: 69	+1.19e-002	0	+3.57e-004	0	+1.50e-002	0
Progressiva	+1.22e+001	85	+8.98e+000	62	+1.36e+001	95
Modo: 70	+4.10e-004	0	+2.07e-005	0	+5.17e-005	0
Progressiva	+1.22e+001	85	+8.98e+000	62	+1.36e+001	95
Modo: 71	+4.53e-006	0	+2.19e-002	0	+1.42e-003	0
Progressiva	+1.22e+001	85	+9.00e+000	63	+1.36e+001	95
Modo: 72	+1.82e-001	1	+1.32e-004	0	+2.27e-002	0
Progressiva	+1.24e+001	86	+9.00e+000	63	+1.36e+001	95
Modo: 73	+6.38e-003	0	+5.31e-003	0	+1.95e-004	0
Progressiva	+1.24e+001	86	+9.00e+000	63	+1.36e+001	95
Modo: 74	+2.77e-003	0	+4.13e-002	0	+1.64e-004	0
Progressiva	+1.24e+001	86	+9.05e+000	63	+1.36e+001	95
Modo: 75	+1.59e-001	1	+7.41e-001	5	+8.42e-003	0
Progressiva	+1.26e+001	87	+9.79e+000	68	+1.36e+001	95
Modo: 76	+3.19e-001	2	+4.23e-002	0	+1.11e-003	0
Progressiva	+1.29e+001	90	+9.83e+000	68	+1.36e+001	95
Modo: 77	+7.75e-002	1	+2.87e-001	2	+1.15e-003	0
Progressiva	+1.29e+001	90	+1.01e+001	70	+1.36e+001	95
Modo: 78	+1.17e-004	0	+3.96e-003	0	+5.54e-009	0
Progressiva	+1.29e+001	90	+1.01e+001	70	+1.36e+001	95
Modo: 79	+3.72e-004	0	+3.51e-004	0	+7.34e-003	0
Progressiva	+1.29e+001	90	+1.01e+001	70	+1.37e+001	95
Modo: 80	+1.61e-002	0	+3.06e-001	2	+5.77e-005	0
Progressiva	+1.30e+001	90	+1.04e+001	73	+1.37e+001	95
Modo: 81	+4.96e-002	0	+1.63e+000	11	+5.82e-004	0
Progressiva	+1.30e+001	91	+1.21e+001	84	+1.37e+001	95
Modo: 82	+2.14e-001	1	+1.07e-002	0	+2.80e-004	0
Progressiva	+1.32e+001	92	+1.21e+001	84	+1.37e+001	95
Modo: 83	+9.53e-003	0	+1.38e-002	0	+1.74e-001	1

## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Modo	Direz.X	%	Direz.Y	%	Direz.Z	%
Progressiva	+1.32e+001	92	+1.21e+001	84	+1.38e+001	96
Modo: 84	+5.85e-003	0	+2.42e-002	0	+3.01e-002	0
Progressiva	+1.32e+001	92	+1.21e+001	84	+1.39e+001	96
Modo: 85	+9.45e-003	0	+1.63e-002	0	+9.99e-003	0
Progressiva	+1.33e+001	92	+1.21e+001	84	+1.39e+001	96
Modo: 86	+3.70e-004	0	+1.86e-004	0	+6.83e-002	0
Progressiva	+1.33e+001	92	+1.21e+001	84	+1.39e+001	97
Modo: 87	+4.23e-004	0	+3.01e-005	0	+2.96e-006	0
Progressiva	+1.33e+001	92	+1.21e+001	84	+1.39e+001	97
Modo: 88	+8.84e-003	0	+6.22e-003	0	+3.39e-004	0
Progressiva	+1.33e+001	92	+1.21e+001	84	+1.39e+001	97
Modo: 89	+1.45e-002	0	+2.31e-003	0	+3.76e-003	0
Progressiva	+1.33e+001	92	+1.21e+001	84	+1.39e+001	97
Modo: 90	+5.28e-002	0	+1.42e-001	1	+1.30e-004	0
Progressiva	+1.33e+001	93	+1.23e+001	85	+1.39e+001	97
Modo: 91	+6.21e-002	0	+2.55e-001	2	+1.35e-003	0
Progressiva	+1.34e+001	93	+1.25e+001	87	+1.39e+001	97
Modo: 92	+8.70e-004	0	+1.04e-002	0	+8.73e-003	0
Progressiva	+1.34e+001	93	+1.25e+001	87	+1.40e+001	97
Modo: 93	+2.49e-004	0	+1.20e-003	0	+2.42e-005	0
Progressiva	+1.34e+001	93	+1.25e+001	87	+1.40e+001	97
Modo: 94	+1.46e-003	0	+1.39e-003	0	+2.66e-003	0
Progressiva	+1.34e+001	93	+1.25e+001	87	+1.40e+001	97
Modo: 95	+1.55e-002	0	+8.62e-002	1	+7.12e-005	0
Progressiva	+1.34e+001	93	+1.26e+001	88	+1.40e+001	97
Modo: 96	+1.88e-002	0	+1.72e-001	1	+8.33e-005	0
Progressiva	+1.34e+001	93	+1.28e+001	89	+1.40e+001	97
Modo: 97	+4.21e-003	0	+1.47e-002	0	+4.10e-003	0
Progressiva	+1.34e+001	93	+1.28e+001	89	+1.40e+001	97
Modo: 98	+3.84e-003	0	+4.23e-002	0	+2.77e-003	0
Progressiva	+1.34e+001	93	+1.29e+001	89	+1.40e+001	97
Modo: 99	+1.65e-008	0	+1.04e-005	0	+4.77e-007	0
Progressiva	+1.34e+001	93	+1.29e+001	89	+1.40e+001	97
Modo: 100	+1.86e-006	0	+1.22e-005	0	+7.30e-008	0
Progressiva	+1.34e+001	93	+1.29e+001	89	+1.40e+001	97

### MASSA TOTALE ECCITABILE

Direzione X  
+1.44e+001

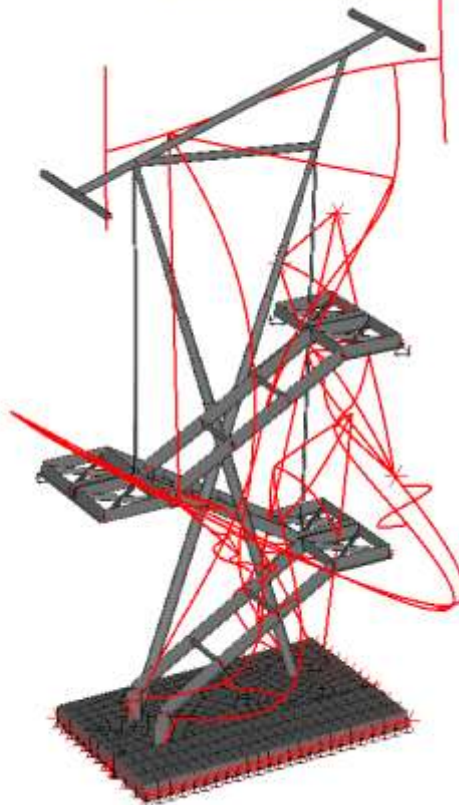
Direzione Y  
+1.44e+001

Direzione Z  
+1.44e+001

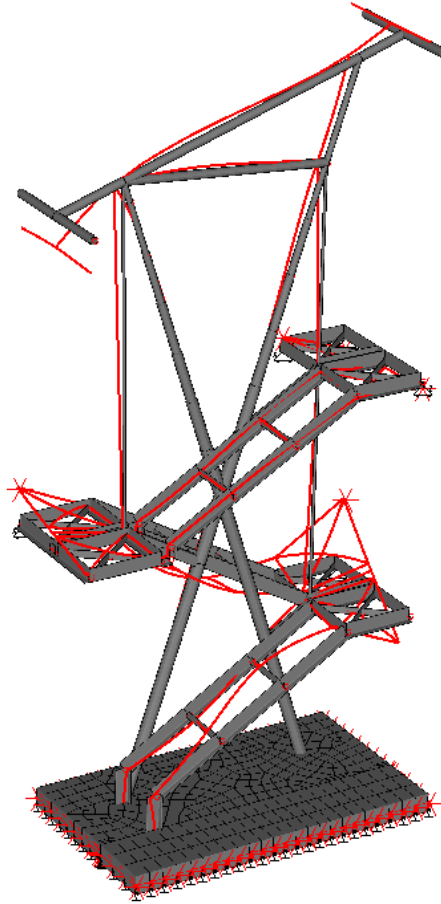
Modo 4  $f = 4.859$  Hz  $T = 0.206$  s



Modo 5  $f = 5.304$  Hz  $T = 0.189$  s



Modo 17  $f=10.310$  Hz  $T= 0.097$  s



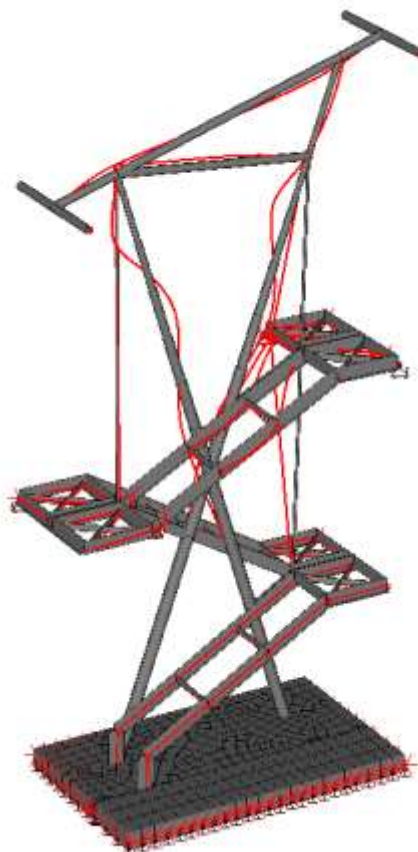
Modo 18  $f=10.950$  Hz  $T= 0.091$  s



Modo 31 f=18,600 Hz T= 0,054 s



Modo 81 f=102,400 Hz T= 0,010 s



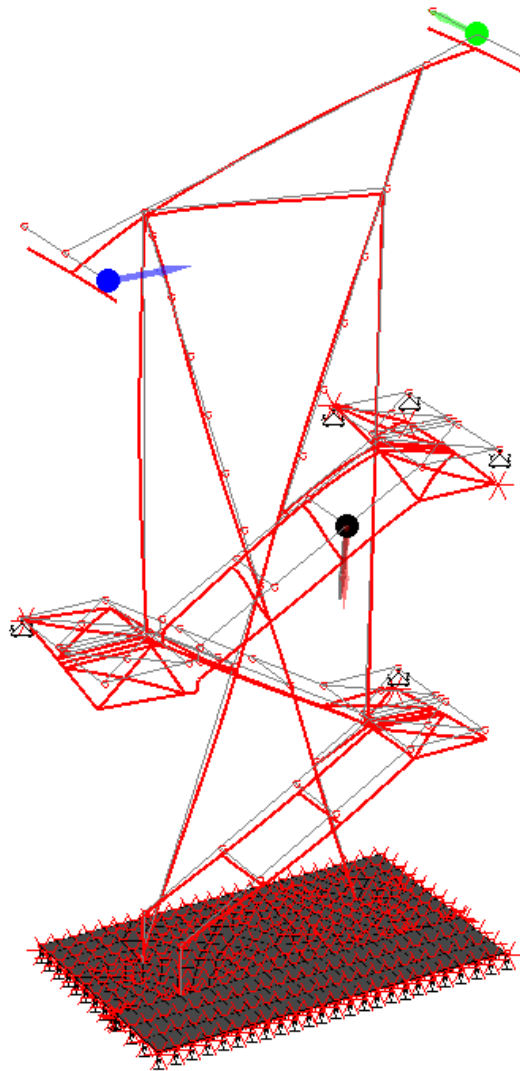
### 2.1.9 PUNTO I)

#### 2.1.9.1 CRITERI DI VERIFICA AGLI STATI LIMITE INDAGATI

Per il dimensionamento degli elementi costituenti la struttura si sono adottati gli stati limite ultimi e gli stati limite di esercizio per il controllo delle deformate.

## 2.1.10 PUNTO J)

### 2.1.10.1 RAPPRESENTAZIONE DELLE CONFIGURAZIONI DEFORMATE PRINCIPALI I CONDIZIONI SISMICHE

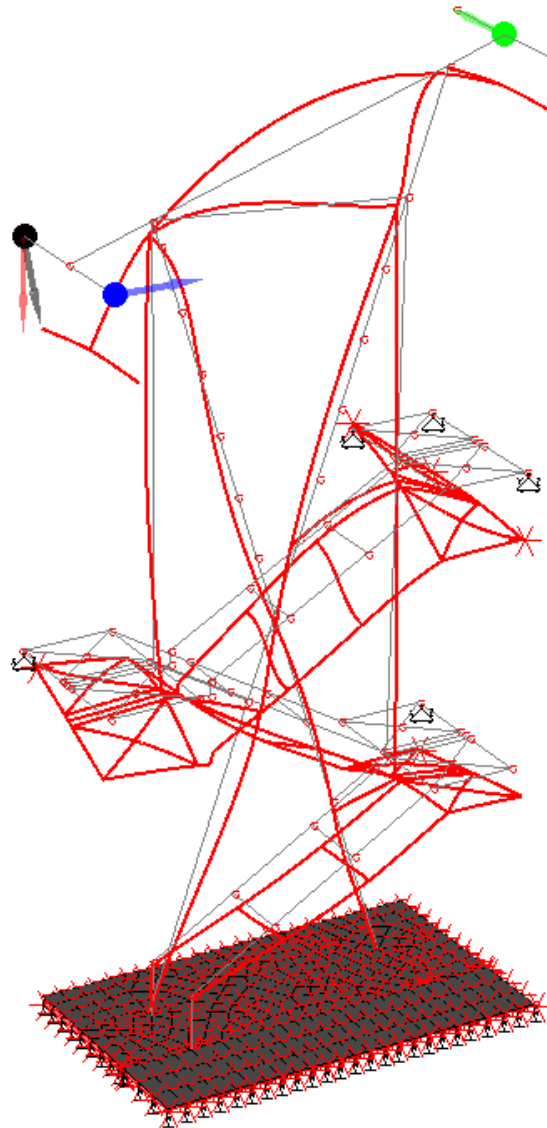


#### COMBINAZIONE SISMICA

Massime deformazioni al nodo 148  $d=0.0049$   $dx=0.0002$   $dy=0.0007$   $dz=-0.0049$   
Direzione x: nodo 106  $dx=0.0012$   $dy=-0.0000$   $dz=-0.0026$   
Direzione y: nodo 185  $dy=0.0017$   $dx=0.0010$   $dz=-0.0024$   
Direzione z: nodo 148  $dz=-0.0049$   $dx=0.0002$   $dy=0.0007$



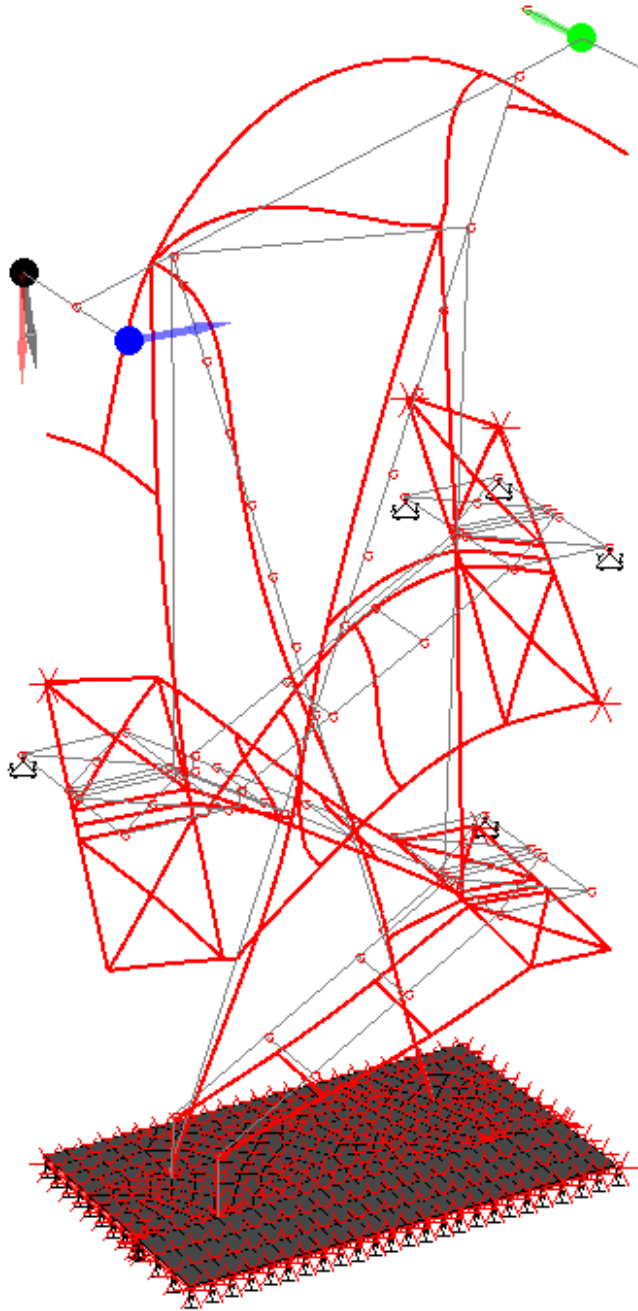
2.1.10.2 RAPPRESENTAZIONE DELLE CONFIGURAZIONI DEFORMATE PRINCIPALI



COMBINAZIONE STATICA SLU

Massime deformazioni tra i nodi visibili:

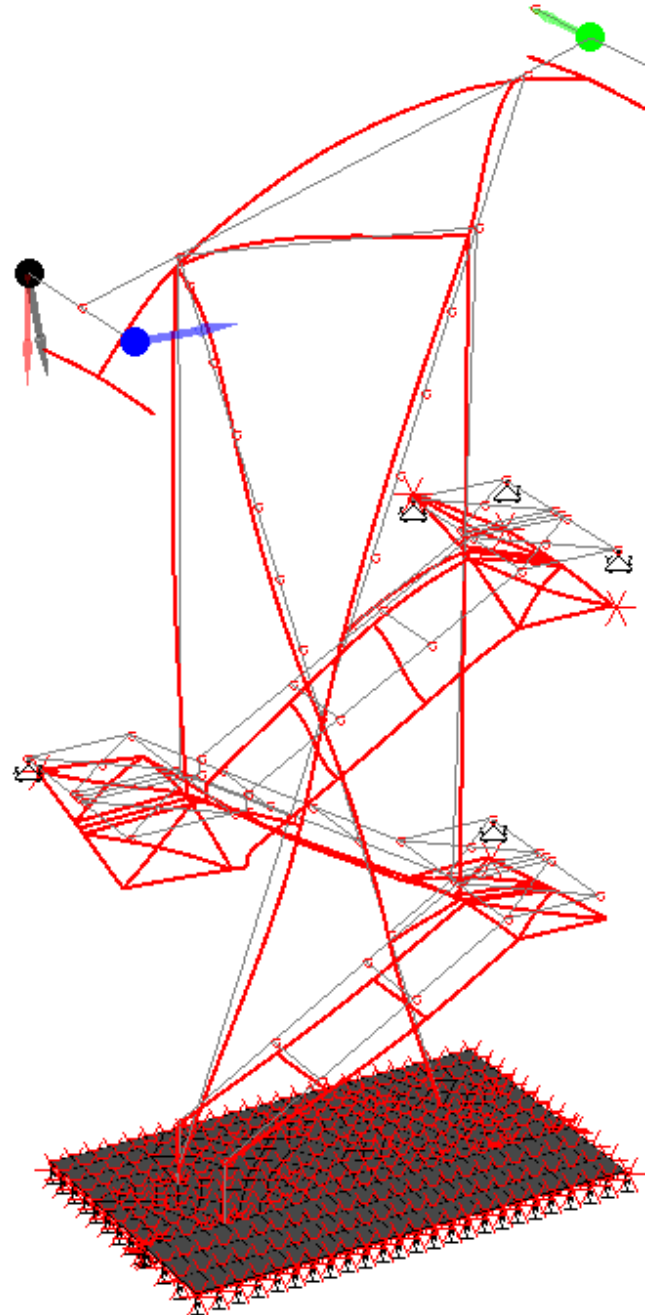
Massime deformazioni al nodo 31  $d=0.0114$   $dx=0.0023$   $dy=0.0001$   $dz=-0.0112$   
Direzione x: nodo 106  $dx=0.0032$   $dy=0.0001$   $dz=-0.0106$   
Direzione y: nodo 185  $dy=0.0032$   $dx=0.0019$   $dz=-0.0070$   
Direzione z: nodo 31  $dz=-0.0112$   $dx=0.0023$   $dy=0.0001$



## COMBINAZIONE STATICA SLU ECCENTRICA

Massime deformazioni tra i nodi visibili:

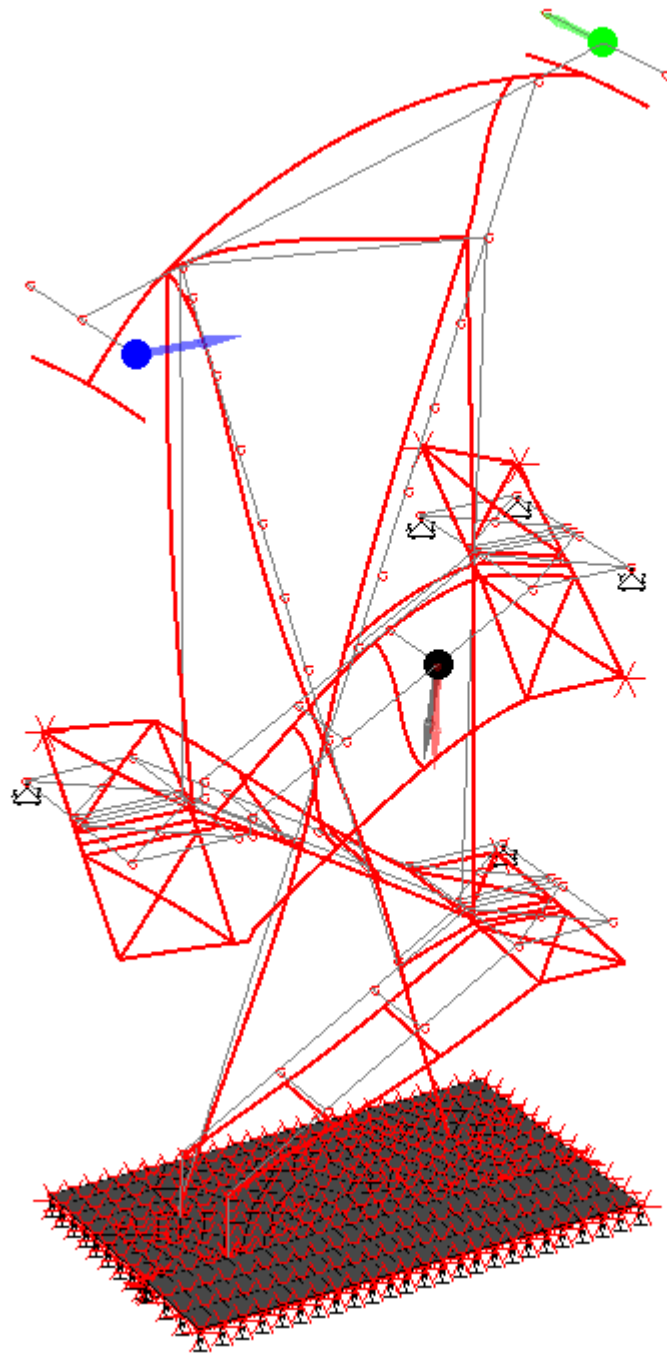
Massime deformazioni al nodo 31  $d=0.0185$   $dx=0.0040$   $dy=0.0025$   $dz=-0.0179$   
Direzione x: nodo 106  $dx=0.0048$   $dy=0.0025$   $dz=-0.0170$   
Direzione y: nodo 185  $dy=0.0059$   $dx=0.0027$   $dz=-0.0104$   
Direzione z: nodo 31  $dz=-0.0179$   $dx=0.0040$   $dy=0.0025$



**COMBINAZIONE RARA**

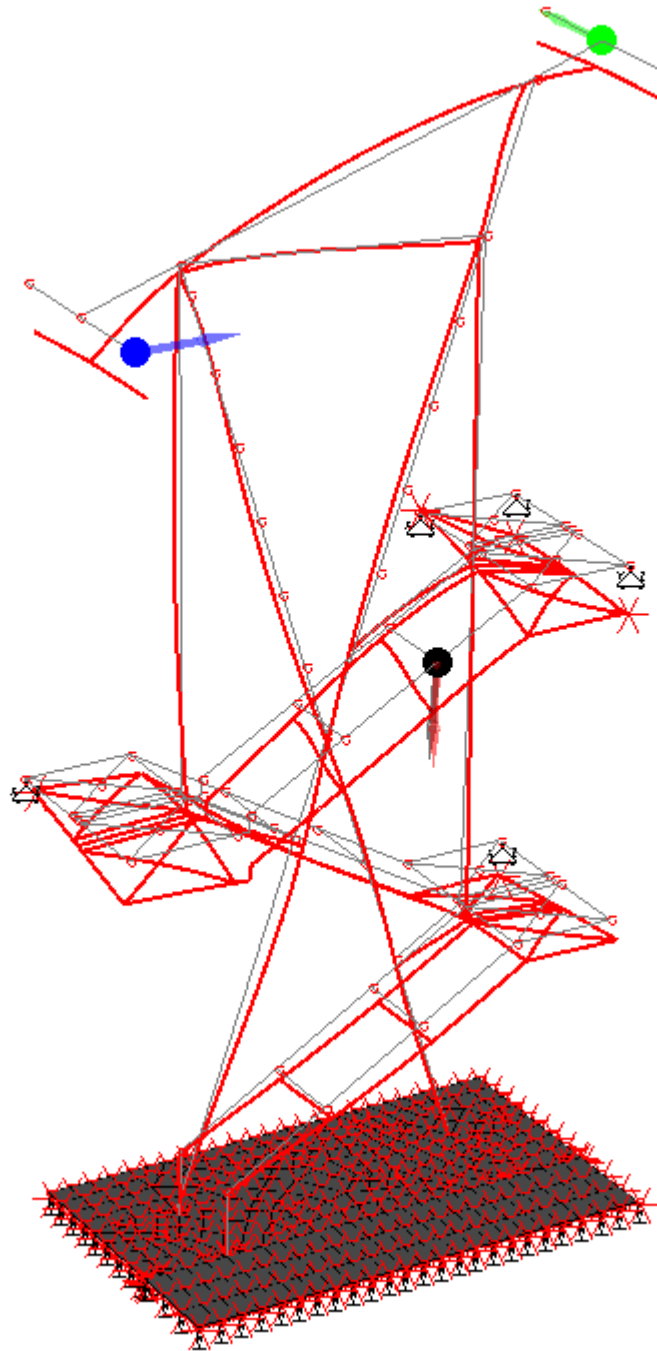
**Massime deformazioni tra i nodi visibili:**

**Massime deformazioni al nodo 31**  $d=0.0080$   $dx=0.0016$   $dy=0.0001$   $dz=-0.0078$   
**Direzione x:** nodo 106  $dx=0.0022$   $dy=0.0001$   $dz=-0.0074$   
**Direzione y:** nodo 185  $dy=0.0022$   $dx=0.0013$   $dz=-0.0049$   
**Direzione z:** nodo 31  $dz=-0.0078$   $dx=0.0016$   $dy=0.0001$



COMBINAZIONE RARA ECCENTRICA

Massime deformazioni al nodo 148  $d=0.0120$   $dx=0.0002$   $dy=0.0023$   $dz=-0.0118$   
Direzione x: nodo 106  $dx=0.0020$   $dy=0.0017$   $dz=-0.0072$   
Direzione y: nodo 185  $dy=0.0041$   $dx=0.0010$   $dz=-0.0046$   
Direzione z: nodo 148  $dz=-0.0118$   $dx=0.0002$   $dy=0.0023$



## COMBINAZIONE FREQUENTE

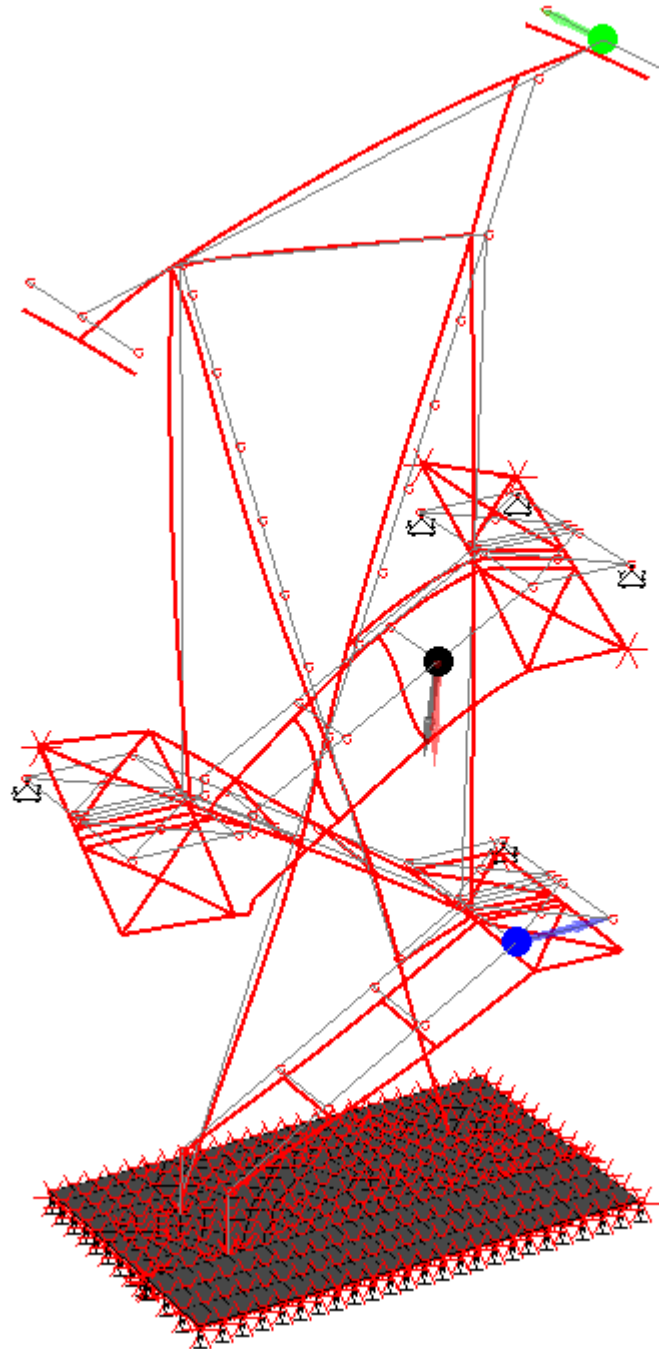
Massime deformazioni tra i nodi visibili:

Massime deformazioni al nodo 148  $d=0.0056$   $dx=0.0002$   $dy=0.0008$   $dz=-0.0055$

Direzione x: nodo 106  $dx=0.0014$   $dy=0.0001$   $dz=-0.0046$

Direzione y: nodo 185  $dy=0.0019$   $dx=0.0008$   $dz=-0.0032$

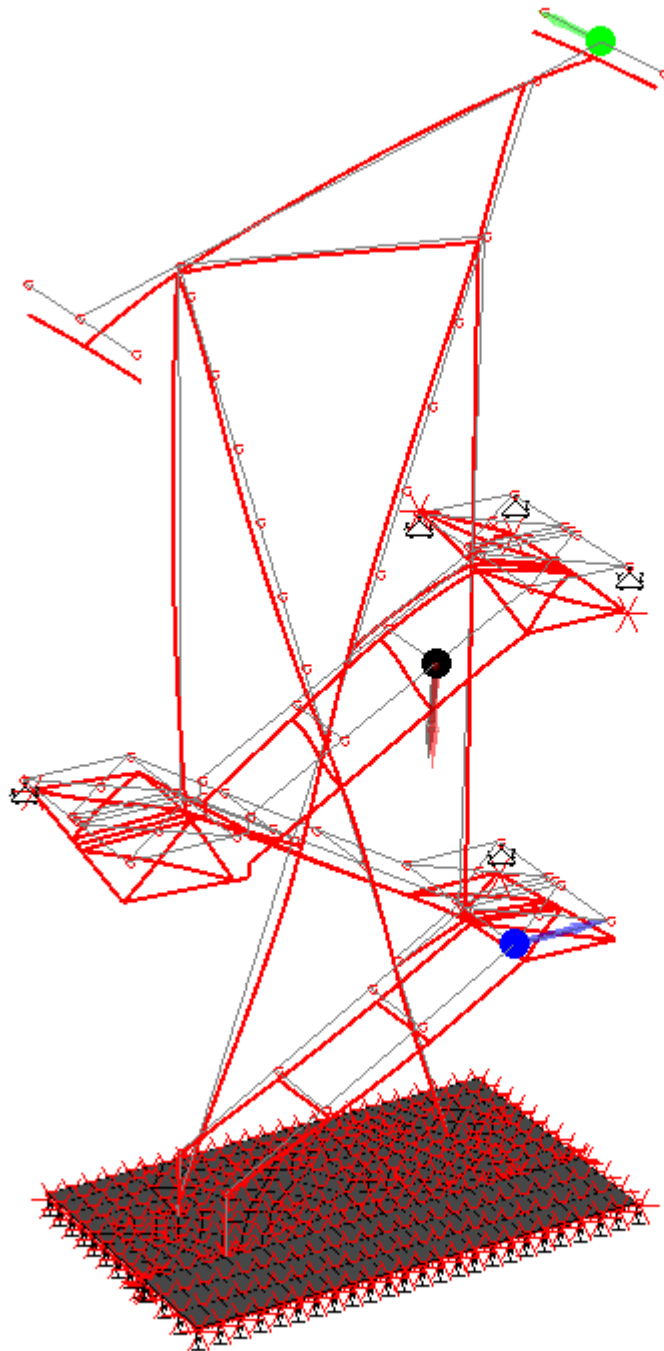
Direzione z: nodo 148  $dz=-0.0055$   $dx=0.0002$   $dy=0.0008$



COMBINAZIONE FREQUENTE ECCENTRICA

Massime deformazioni tra i nodi visibili:

Massime deformazioni al nodo 148  $d=0.0092$   $dx=0.0002$   $dy=0.0017$   $dz=-0.0091$   
Direzione x: nodo 33  $dx=0.0016$   $dy=-0.0010$   $dz=-0.0030$   
Direzione y: nodo 185  $dy=0.0031$   $dx=0.0002$   $dz=-0.0019$   
Direzione z: nodo 148  $dz=-0.0091$   $dx=0.0002$   $dy=0.0017$



COMBINAZIONE QUASI PERMANENTE

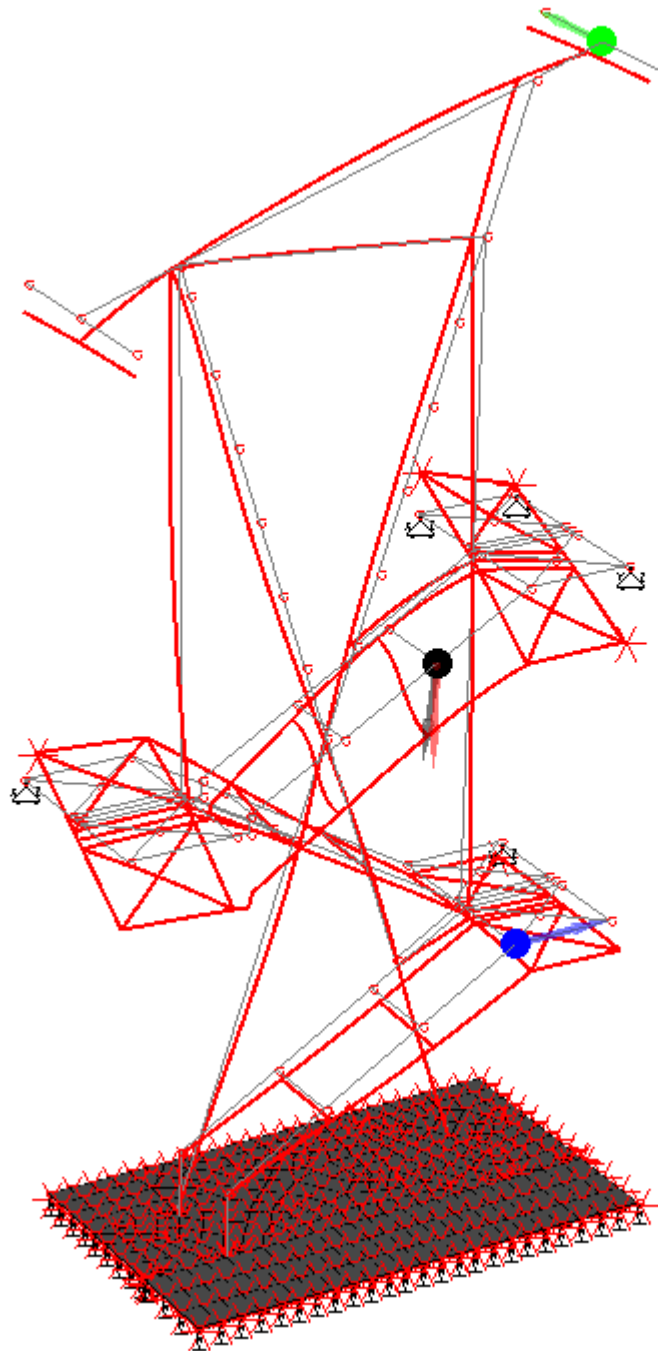
Massime deformazioni tra i nodi visibili:

Massime deformazioni al nodo 148  $d=0.0052$   $dx=0.0002$   $dy=0.0007$   $dz=-0.0051$

Direzione x: nodo 33  $dx=0.0009$   $dy=-0.0005$   $dz=-0.0018$

Direzione y: nodo 185  $dy=0.0017$   $dx=0.0004$   $dz=-0.0021$

Direzione z: nodo 148  $dz=-0.0051$   $dx=0.0002$   $dy=0.0007$



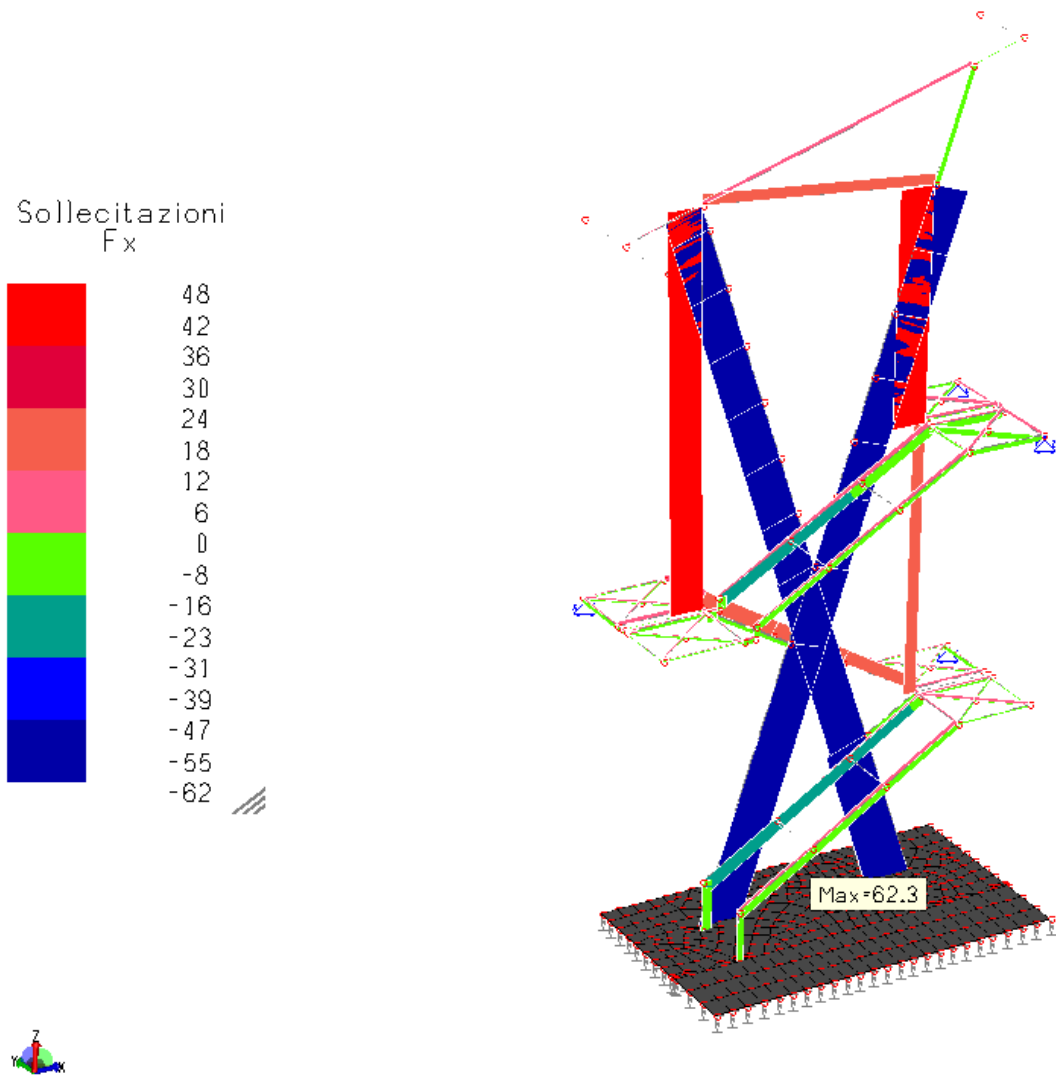
COMBINAZIONE QUASI PERMANENTE ECCENTRICO

Massime deformazioni tra i nodi visibili:

Massime deformazioni al nodo 148  $d=0.0083$   $dx=0.0001$   $dy=0.0015$   $dz=-0.0082$   
Direzione x: nodo 33  $dx=0.0014$   $dy=-0.0009$   $dz=-0.0028$   
Direzione y: nodo 185  $dy=0.0028$   $dx=0.0003$   $dz=-0.0019$   
Direzione z: nodo 148  $dz=-0.0082$   $dx=0.0001$   $dy=0.0015$

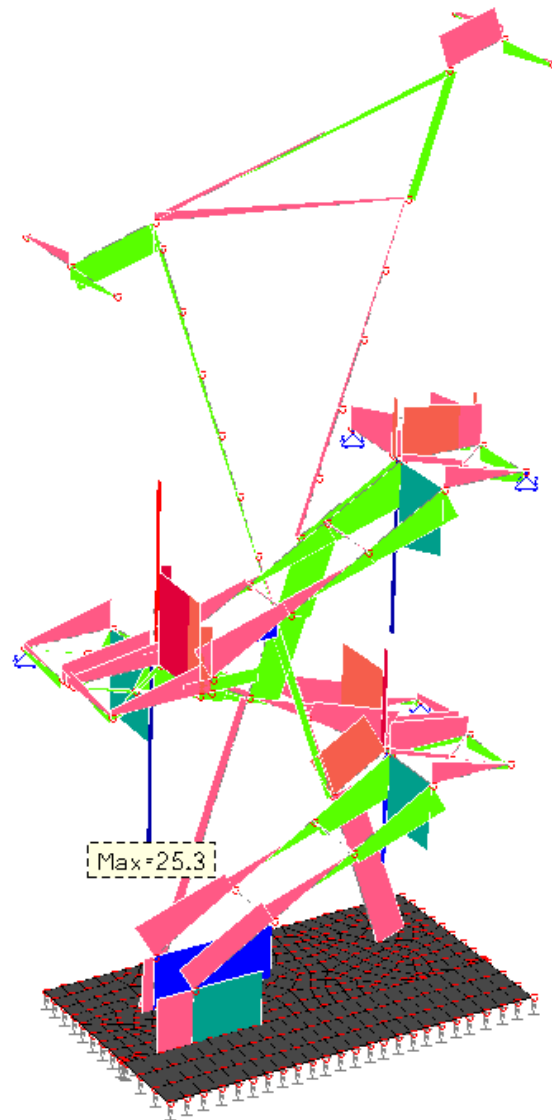
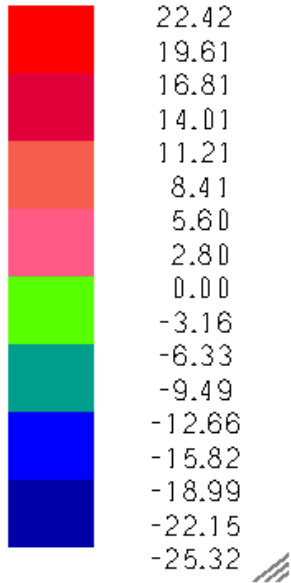


2.1.10.3 RAPPRESENTAZIONE AZIONI INTERNE PER LA COMBINAZIONE SISMICA



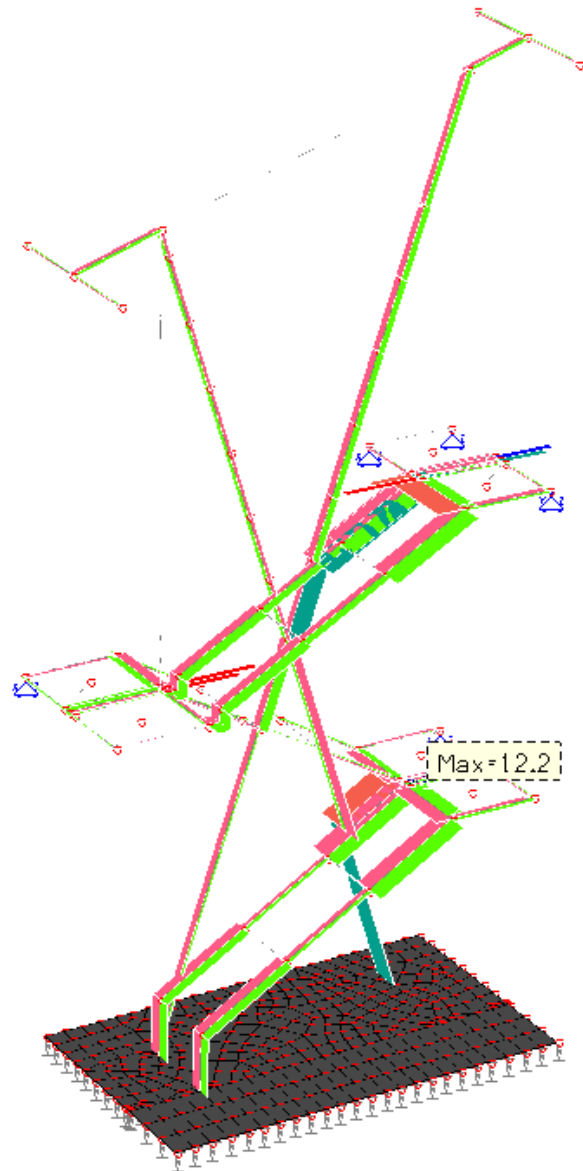
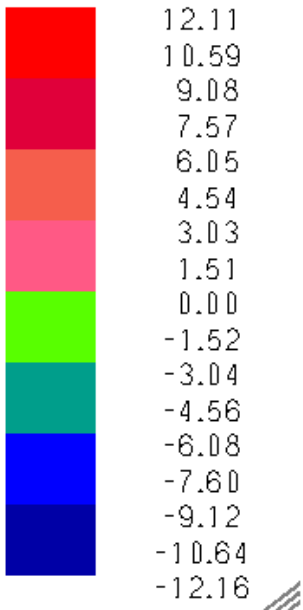
AZIONE ASSIALE

Sollecitazioni  
 $F_y$



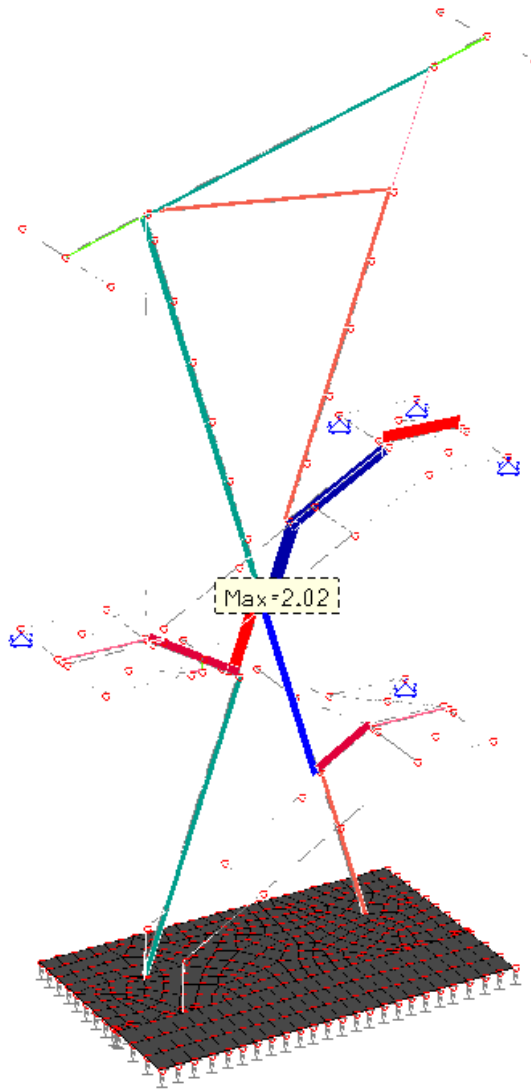
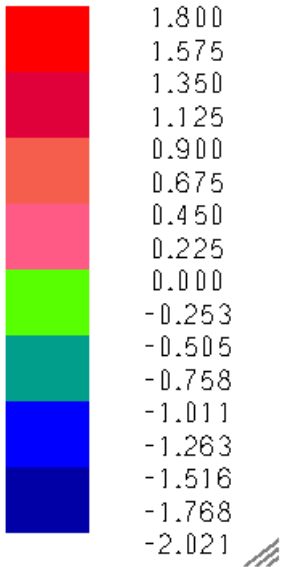
AZIONE TAGLIANTE

Sollecitazioni  
 $F_z$



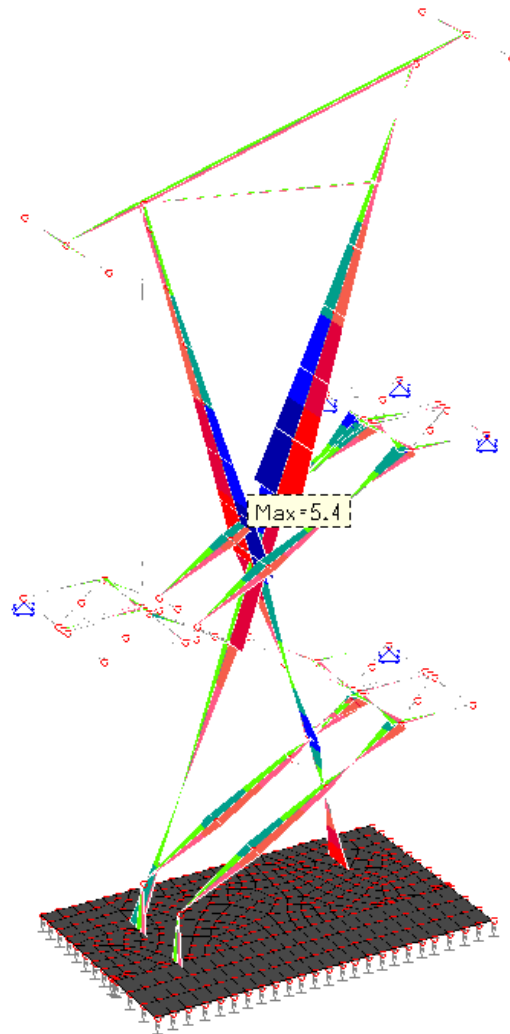
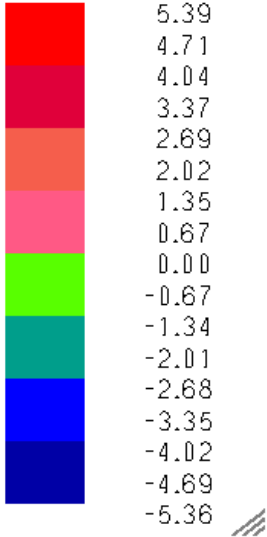
AZIONE TAGLIANTE

Sollecitazioni  
 $M_x$



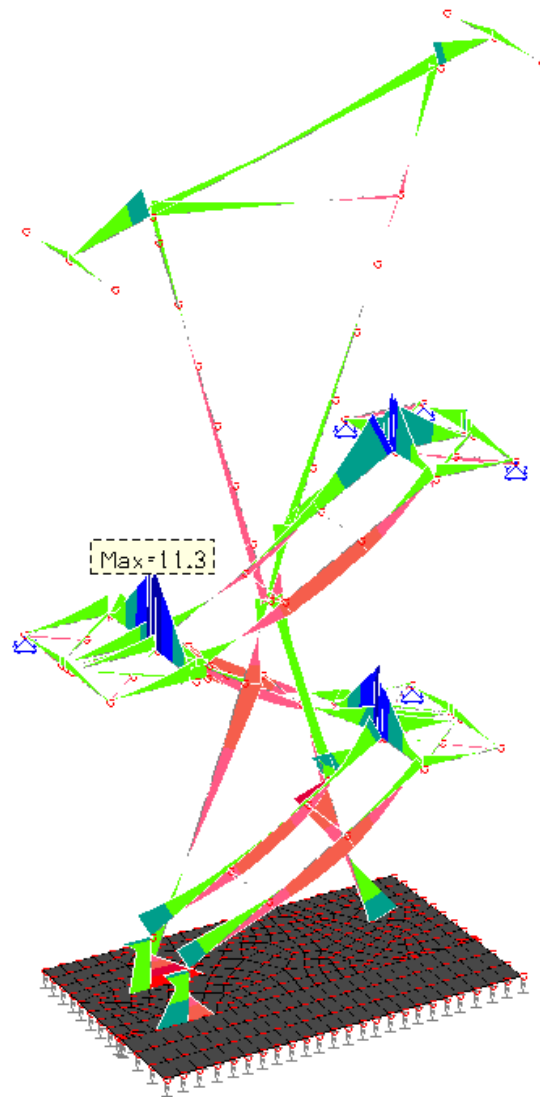
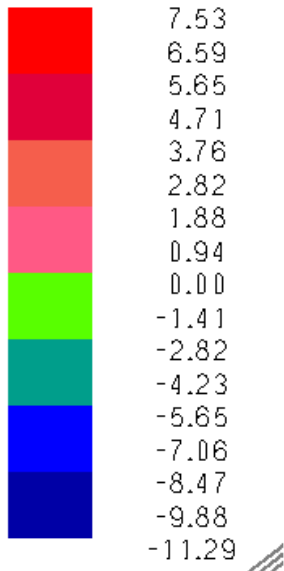
MOMENTO TORCENTE

Sollecitazioni  
My



MOMENTO FLETTENTE

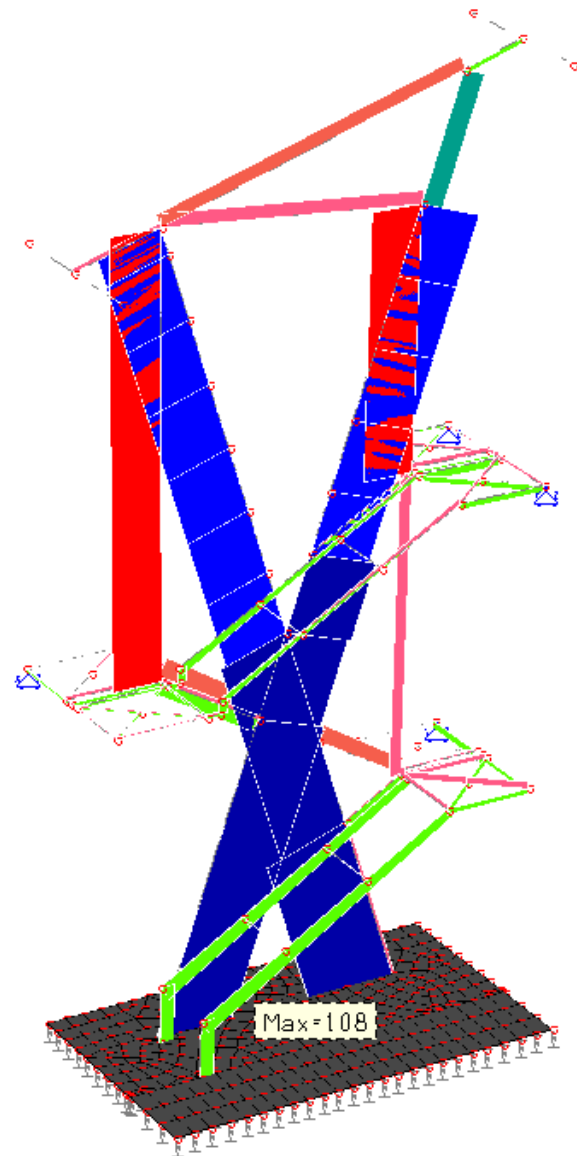
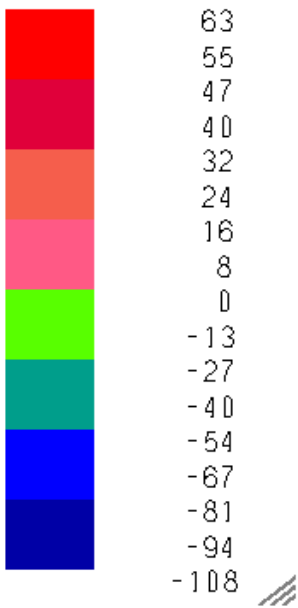
Sollecitazioni  
Mz



MOMENTO FLETTENTE

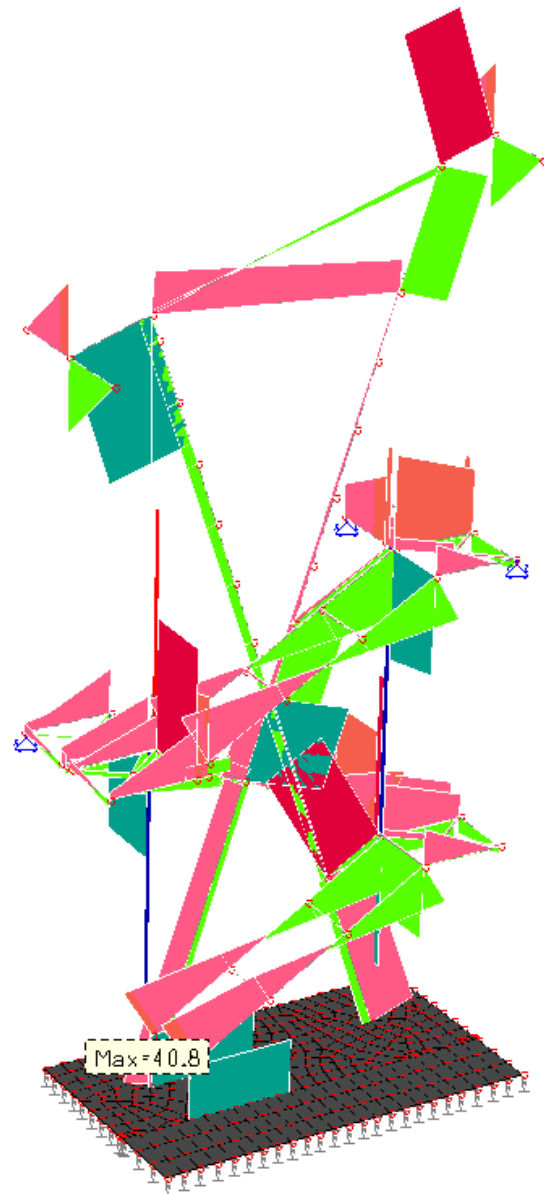
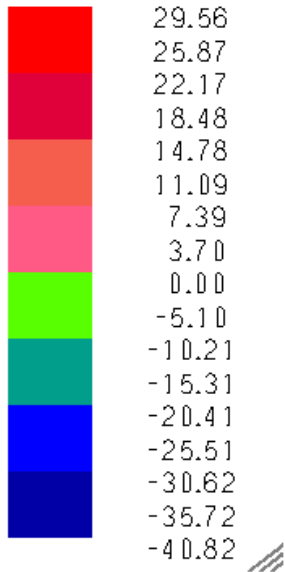
2.1.10.4 RAPPRESENTAZIONE AZIONI INTERNE PER LA COMBINAZIONE STATICA

Sollecitazioni  
 $F_x$



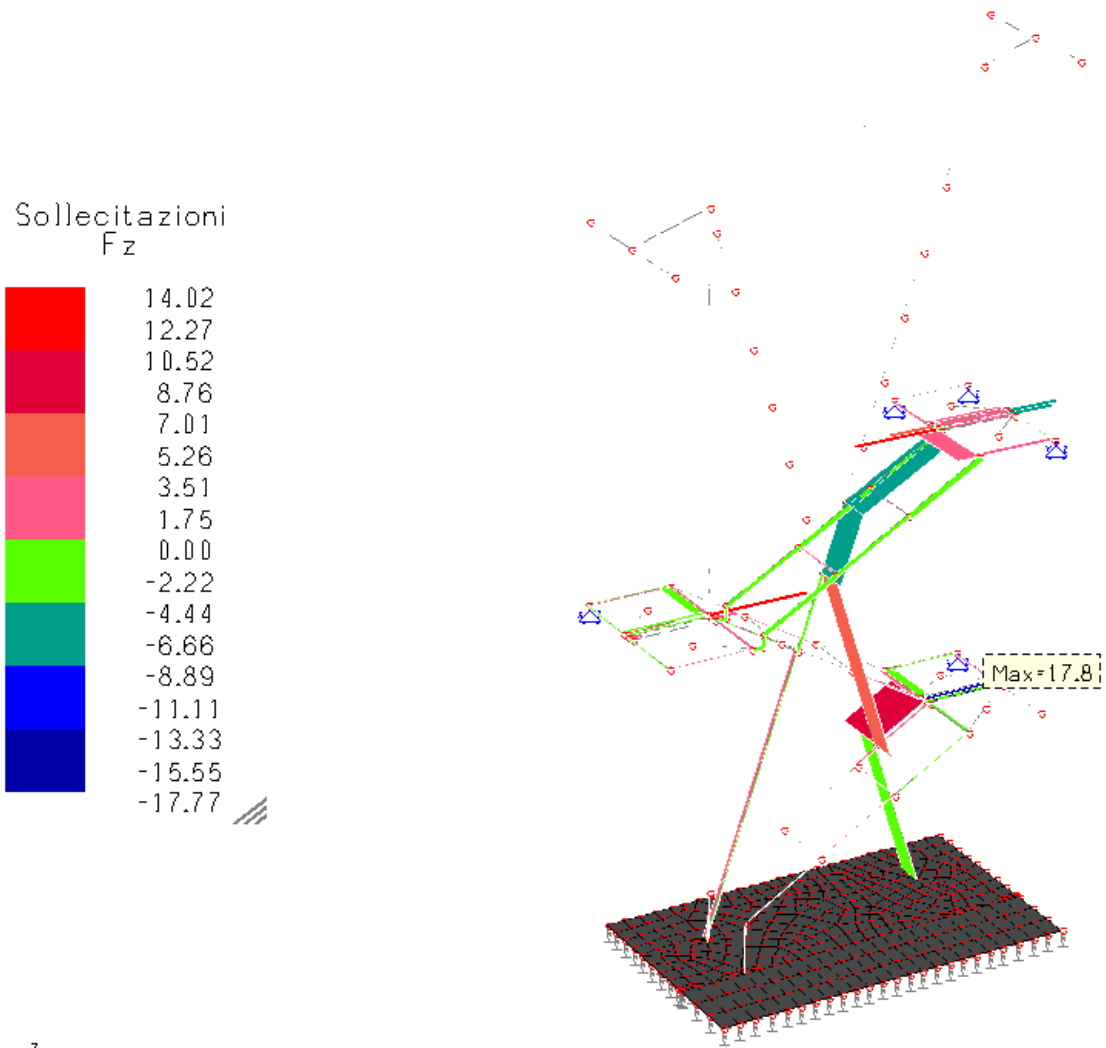
AZIONE ASSIALE

Sollecitazioni  
 $F_y$



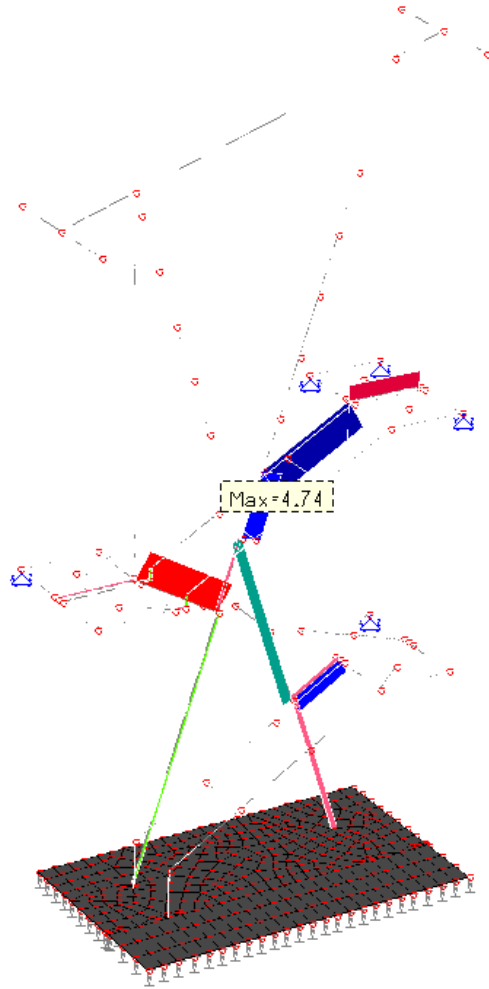
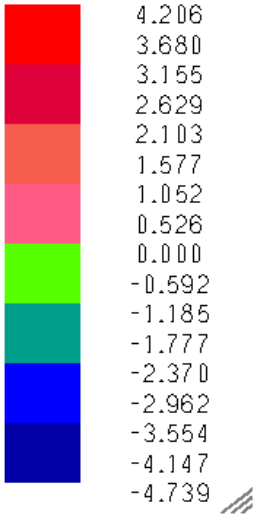
AZIONE TAGLIANTE





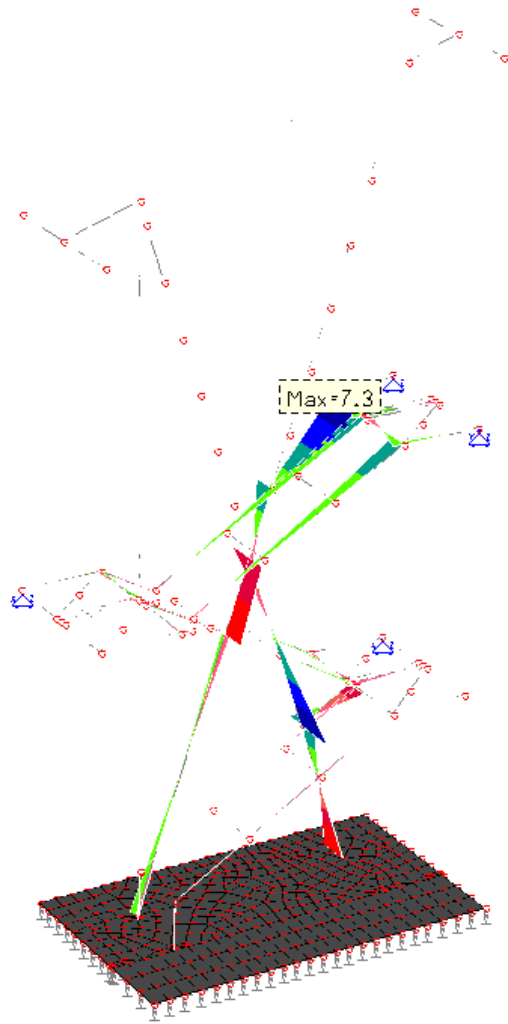
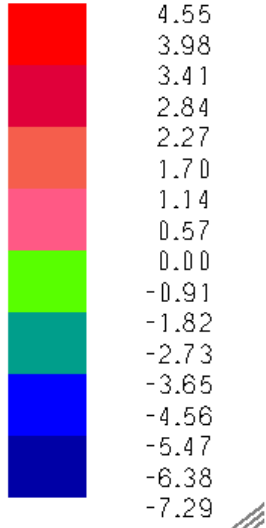
AZIONE TAGLIANTE

Sollecitazioni  
M<sub>x</sub>



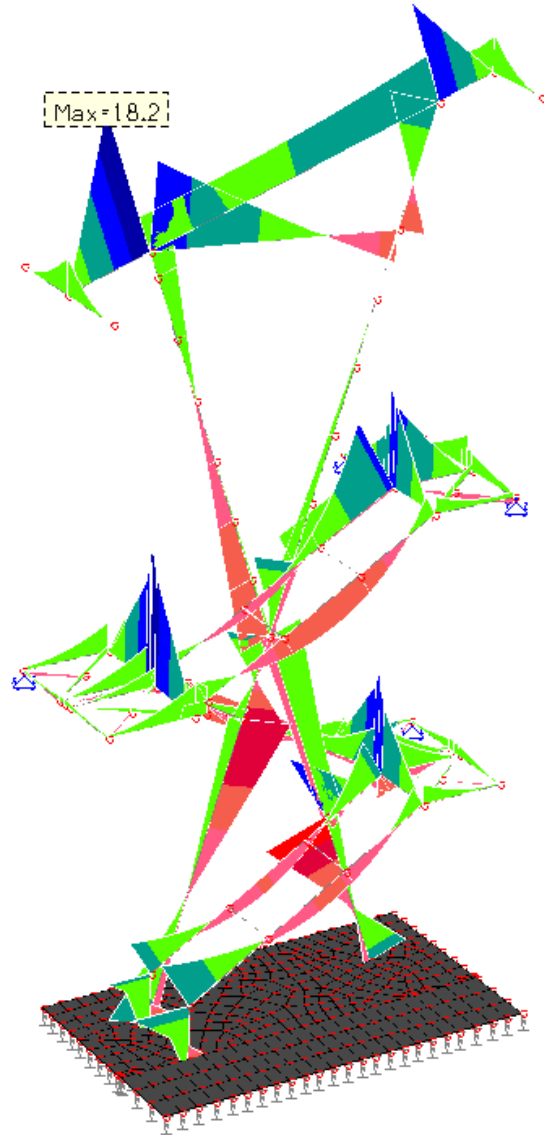
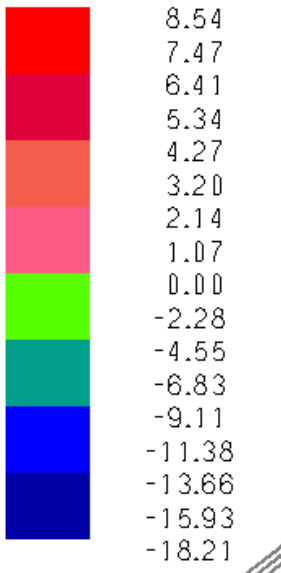
MOMENTO TORCENTE

Sollecitazioni  
My



MOMENTO FLETTENTE

Sollecitazioni  
Mz



MOMENTO FLETTENTE

2.1.10.5 GIUDIZIO MOTIVATO DI ACCETTABILITA' DEI RISULTATI

**Totali forze sismiche da calcolo automatico**

C.C	$\Delta_X$ [cm]	$\Delta_Y$ [cm]	$d_{rx}$ [cm]	$d_{ry}$ [cm]	FX	FY	FZ	$\theta_X$	$\theta_Y$
1 Statica+(EX+ $\lambda$ *EY)	0.00	0.00	-0.59	-2.10	19.29	13.04	15.26	0.00	0.00
1 Statica+( $\lambda$ *EX+EY)	0.00	0.00	-0.26	-5.19	7.83	27.41	15.26	0.00	0.00

Di seguito si determina in via semplificata e approssimata il tagliante alla base con le formule dell'analisi statica lineare.

	Superficie	Peso strutturale	Permanenti	Variabile x $\phi$	Peso
Rampe	10.4	0.2500	4.0000	0.6000	27.56
	5.2	0.2500	4.0000	0.6000	13.78
Parapetto	20	1.0000			20
Peso proprio carpenteria					25
					<b>86 kN</b>
					<b>W = 86 kN</b>
	T1	0.513 s			
	Sd(T1)=	0.39 g			
	$\lambda$ =	1			
<b>tagliante alla base</b>	<b>Fh</b>	<b>34 kN</b>			

Il risultato ottenuto è in linea con quelli ottenuti dal calcolo automatico.

### 2.1.11 PUNTO K)

#### 2.1.11.1 INFORMAZIONI SUL CODICE DI CALCOLO

Si utilizza il software di calcolo MASTERSAP versione 2018 ad elementi finiti che permette l'analisi strutturale statica e sismica in ottemperanza al DM 17 gennaio 2018.

A seguito dell'analisi strutturale MASTERSAP realizza il dimensionamento di opere in c.a., metalliche (acciaio e alluminio), legno, muratura in base alle disposizioni della normativa vigente scelta tra quelle sopraelencate. Tale codice di calcolo è prodotto da AMV s.r.l con sede a Ronchi dei Legionari. La licenza utilizzata è la numero 32903

#### 2.1.11.2 AFFIDABILITÀ DEL CODICE UTILIZZATO

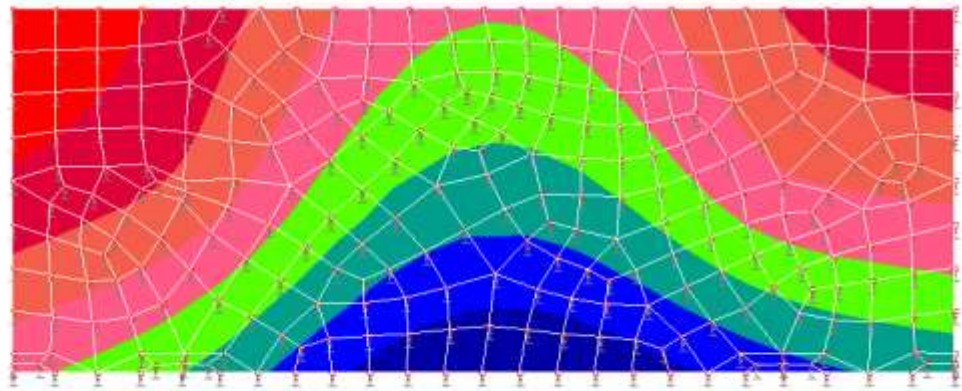
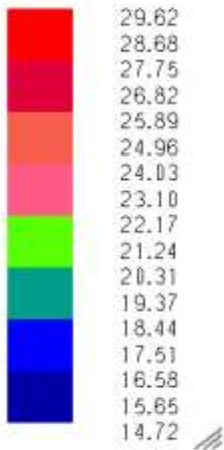
Il sottoscritto progettista ha preliminarmente esaminato la documentazione a corredo del software di calcolo precedentemente descritto e ne ha valutato l'affidabilità e l'idoneità allo scopo della progettazione oggetto della relazione.

2.1.12 PUNTO L)

2.1.12.1 REQUISITI DELLE FONDAZIONI

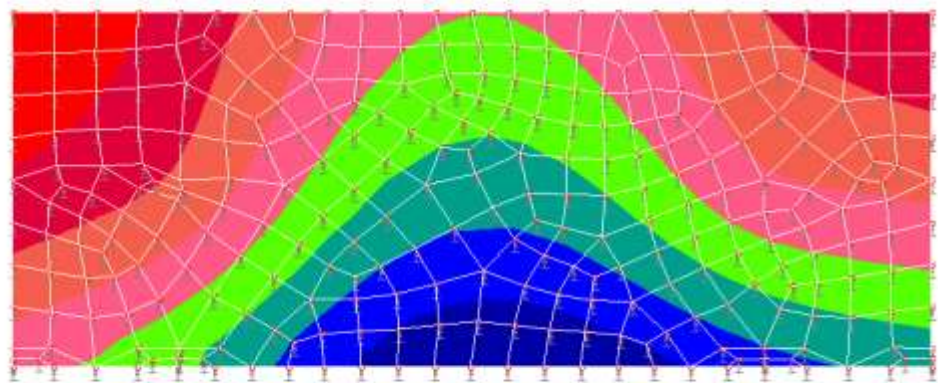
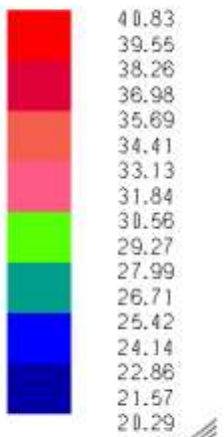
Le fondazioni previste per l'opera in oggetto sono di tipo superficiale a platea, sono impostate a circa -0,50 m dal piano di campagna. Il requisito fondamentale è il contenimento delle deformazioni a breve ed a lungo termine.

Press.Platea SLE  
kN/mq



COMBINAZIONE RARA ALLO SLE

Press.Platea SLU  
kN/mq



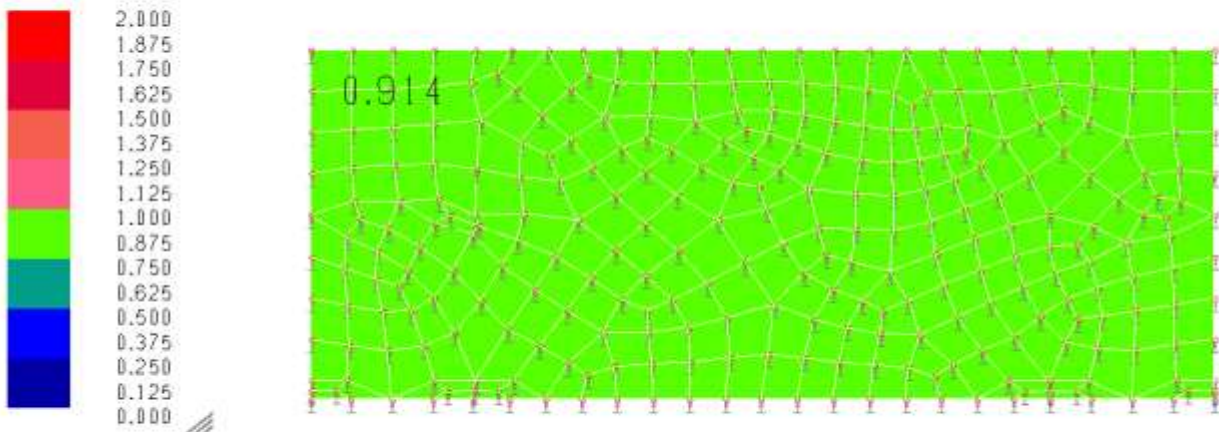
COMBINAZIONE SLU

### 2.1.12.2 VERIFICA CAPACITA' PORTANTE

Si riportano le verifiche geotecniche confrontando le pressioni derivanti dall'analisi della struttura ai parametri ed ai valori forniti dalla relazione geologico - geotecnica.

L'approccio seguito per la verifica della capacità portante è il secondo considerando la combinazione A1 M1 R3

Inv. indici platea



#### Caratteristiche geotecniche del terreno:

Peso specifico terreno:	19000	N/m <sup>3</sup>	Cu, coesione:	0.000	N/mm <sup>2</sup>
Angolo di attrito:	25.00	gradi	Profondità di posa:	50.0	cm
Angolo di attrito terreno-fondazione	14.00	gradi	Adesione terreno-fondazione:	0.000	N/mm <sup>2</sup>

#### Metodo di calcolo della capacità portante:

Criterio di: Eurocodice7

#### Coefficienti sismici globali:

Coefficiente sismico [khiX]: 0.228  
 Coefficiente sismico [khiY]: 0.228  
 Coefficiente sismico [khk]: 0.042

#### Tipo fondazione: platea

Area: 93550 cmq  
 Lato medio: 306 cm  
 Fattore di riduzione (Bowles) ry: 0.954, Base ridotta B': 292 cm

Combinazione: 1 Descrizione: Dinamica azione sismica PRESENTE

#### Coefficienti parziali γM di sicurezza per i parametri geotecniche del terreno

Tangente angolo res. taglio: 1.00  
 Coesione efficace: 1.00  
 Resistenza non drenata: 1.00  
 Peso dell'unità di volume: 1.00

#### Coefficienti parziali γR di sicurezza per le verifiche SLU

Capacità portante: 1.00  
 Scorrimento: 1.00

Fattore Nq:	10.66	Fattore Nc:	20.72	Fattore Ny:	9.01
Fatt. inclinazione del carico [iqX]:	0.68	Fatt. inclinazione del carico [icX]:	0.65	Fatt. inclinazione del carico [iyX]:	0.40
Fatt. inclinazione del carico [iqY]:	0.68	Fatt. inclinazione del carico [icY]:	0.65	Fatt. inclinazione del carico [iyY]:	0.40
Fattore di forma [sq]:	1.00	Fattore di forma [sc]:	1.00	Fattore di forma [sy]:	1.00
Fattore di profondità' [dq]:	0.00	Fattore di profondità' [dc]:	0.00	Fattore di profondità' [dy]:	0.00
Coefficiente correttivo [eyk]:	0.96	Coefficiente correttivo [eyiX]:	0.42	Coefficiente correttivo [eyiY]:	0.42

#### Verifica della capacità portante

Qult (sisma in dir.X): 169.170 kN/m<sup>2</sup>  
 Qult (sisma in dir.Y): 169.170 kN/m<sup>2</sup>  
 Max pressione suolo: 29.395 kN/m<sup>2</sup>  
 Indice di resistenza: 0.17

#### Verifica a scorrimento

Carico orizzontale in dir.X agente sulla fondazione: 47.31 kN  
 Carico orizzontale in dir.Y agente sulla fondazione: 47.31 kN



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Carico verticale agente sulla fondazione: 207.70 kN  
Forza resistente per attrito: 51.78 kN  
Indice di resistenza: 0.91

Combinazione: 2 Descrizione: **Statica** azione sismica **ASSENTE**

### Coefficienti parziali $\gamma_M$ di sicurezza per i parametri geotecnici del terreno

Tangente angolo res. taglio: 1.00  
Coesione efficace: 1.00  
Resistenza non drenata: 1.00  
Peso dell'unita' di volume: 1.00

### Coefficienti parziali $\gamma_R$ di sicurezza per le verifiche SLU

Capacita' portante: 1.00  
Scorrimento: 1.00

Fattore Nq: 10.66 Fattore Nc: 20.72 Fattore Ny: 9.01  
Fatt. inclinazione del carico [iqX]: 1.00 Fatt. inclinazione del carico [icX]: 1.00 Fatt. inclinazione del carico [iyX]: 1.00  
Fatt. inclinazione del carico [iqY]: 1.00 Fatt. inclinazione del carico [icY]: 1.00 Fatt. inclinazione del carico [iyY]: 1.00  
Fattore di forma [sq]: 1.00 Fattore di forma [sc]: 1.00 Fattore di forma [sy]: 1.00  
Fattore di profondita' [dq]: 0.00 Fattore di profondita' [dc]: 0.00 Fattore di profondita' [dy]: 0.00  
Coefficiente correttivo [eyk]: 0.00 Coefficiente correttivo [eyiX]: 0.00 Coefficiente correttivo [eyiY]: 0.00

### Verifica della capacita' portante

QUlt: 351.045 kN/m<sup>2</sup>  
Max pressione suolo: 40.829 kN/m<sup>2</sup>  
Indice di resistenza: 0.12

Combinazione: 3 Descrizione: **Rara** azione sismica **ASSENTE**

### Coefficienti parziali $\gamma_M$ di sicurezza per i parametri geotecnici del terreno

Tangente angolo res. taglio: 1.00  
Coesione efficace: 1.00  
Resistenza non drenata: 1.00  
Peso dell'unita' di volume: 1.00

Coeff. sicurezza SLE: 3.0

Fattore Nq: 10.66 Fattore Nc: 20.72 Fattore Ny: 9.01  
Fatt. inclinazione del carico [iqX]: 1.00 Fatt. inclinazione del carico [icX]: 1.00 Fatt. inclinazione del carico [iyX]: 1.00  
Fatt. inclinazione del carico [iqY]: 1.00 Fatt. inclinazione del carico [icY]: 1.00 Fatt. inclinazione del carico [iyY]: 1.00  
Fattore di forma [sq]: 1.00 Fattore di forma [sc]: 1.00 Fattore di forma [sy]: 1.00  
Fattore di profondita' [dq]: 0.00 Fattore di profondita' [dc]: 0.00 Fattore di profondita' [dy]: 0.00  
Coefficiente correttivo [eyk]: 0.00 Coefficiente correttivo [eyiX]: 0.00 Coefficiente correttivo [eyiY]: 0.00

### Verifica della capacita' portante

QUlt: 351.045 kN/m<sup>2</sup>  
Max pressione suolo: 29.616 kN/m<sup>2</sup>  
Indice di resistenza: 0.25

Combinazione: 4 Descrizione: **Frequente** azione sismica **ASSENTE**

### Coefficienti parziali $\gamma_M$ di sicurezza per i parametri geotecnici del terreno

Tangente angolo res. taglio: 1.00  
Coesione efficace: 1.00  
Resistenza non drenata: 1.00  
Peso dell'unita' di volume: 1.00

Coeff. sicurezza SLE: 3.0

Fattore Nq: 10.66 Fattore Nc: 20.72 Fattore Ny: 9.01  
Fatt. inclinazione del carico [iqX]: 1.00 Fatt. inclinazione del carico [icX]: 1.00 Fatt. inclinazione del carico [iyX]: 1.00  
Fatt. inclinazione del carico [iqY]: 1.00 Fatt. inclinazione del carico [icY]: 1.00 Fatt. inclinazione del carico [iyY]: 1.00  
Fattore di forma [sq]: 1.00 Fattore di forma [sc]: 1.00 Fattore di forma [sy]: 1.00  
Fattore di profondita' [dq]: 0.00 Fattore di profondita' [dc]: 0.00 Fattore di profondita' [dy]: 0.00  
Coefficiente correttivo [eyk]: 0.00 Coefficiente correttivo [eyiX]: 0.00 Coefficiente correttivo [eyiY]: 0.00

### Verifica della capacita' portante

QUlt: 351.045 kN/m<sup>2</sup>  
Max pressione suolo: 25.702 kN/m<sup>2</sup>  
Indice di resistenza: 0.22

Combinazione: 5 Descrizione: **Quasi permanente** azione sismica **ASSENTE**

### Coefficienti parziali $\gamma_M$ di sicurezza per i parametri geotecnici del terreno

Tangente angolo res. taglio: 1.00  
Coesione efficace: 1.00  
Resistenza non drenata: 1.00  
Peso dell'unita' di volume: 1.00

Coeff. sicurezza SLE: 3.0

Fattore Nq: 10.66 Fattore Nc: 20.72 Fattore Ny: 9.01  
Fatt. inclinazione del carico [iqX]: 1.00 Fatt. inclinazione del carico [icX]: 1.00 Fatt. inclinazione del carico [iyX]: 1.00  
Fatt. inclinazione del carico [iqY]: 1.00 Fatt. inclinazione del carico [icY]: 1.00 Fatt. inclinazione del carico [iyY]: 1.00  
Fattore di forma [sq]: 1.00 Fattore di forma [sc]: 1.00 Fattore di forma [sy]: 1.00  
Fattore di profondita' [dq]: 0.00 Fattore di profondita' [dc]: 0.00 Fattore di profondita' [dy]: 0.00  
Coefficiente correttivo [eyk]: 0.00 Coefficiente correttivo [eyiX]: 0.00 Coefficiente correttivo [eyiY]: 0.00

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

### Verifica della capacità portante

QUlt: 351.045 kN/m<sup>2</sup>  
Max pressione suolo: 24.117 kN/m<sup>2</sup>  
Indice di resistenza: 0.21

Combinazione: 7 Descrizione: **Statica eccentrica** azione sismica **ASSENTE**

### Coefficienti parziali $\gamma_M$ di sicurezza per i parametri geotecnici del terreno

Tangente angolo res. taglio: 1.00  
Coesione efficace: 1.00  
Resistenza non drenata: 1.00  
Peso dell'unità di volume: 1.00

### Coefficienti parziali $\gamma_R$ di sicurezza per le verifiche SLU

Capacità portante: 1.00  
Scorrimento: 1.00

Fattore Nq: 10.66 Fattore Nc: 20.72 Fattore Ny: 9.01  
Fatt. inclinazione del carico [iqX]: 1.00 Fatt. inclinazione del carico [icX]: 1.00 Fatt. inclinazione del carico [iyX]: 1.00  
Fatt. inclinazione del carico [iqY]: 1.00 Fatt. inclinazione del carico [icY]: 1.00 Fatt. inclinazione del carico [iyY]: 1.00  
Fattore di forma [sq]: 1.00 Fattore di forma [sc]: 1.00 Fattore di forma [sy]: 1.00  
Fattore di profondità [dq]: 0.00 Fattore di profondità [dc]: 0.00 Fattore di profondità [dy]: 0.00  
Coefficiente correttivo [eyk]: 0.00 Coefficiente correttivo [eyiX]: 0.00 Coefficiente correttivo [eyiY]: 0.00

### Verifica della capacità portante

QUlt: 351.045 kN/m<sup>2</sup>  
Max pressione suolo: 33.054 kN/m<sup>2</sup>  
Indice di resistenza: 0.09

Combinazione: 8 Descrizione: **Rara eccentrica** azione sismica **ASSENTE**

### Coefficienti parziali $\gamma_M$ di sicurezza per i parametri geotecnici del terreno

Tangente angolo res. taglio: 1.00  
Coesione efficace: 1.00  
Resistenza non drenata: 1.00  
Peso dell'unità di volume: 1.00

Coeff. sicurezza SLE: 3.0

Fattore Nq: 10.66 Fattore Nc: 20.72 Fattore Ny: 9.01  
Fatt. inclinazione del carico [iqX]: 1.00 Fatt. inclinazione del carico [icX]: 1.00 Fatt. inclinazione del carico [iyX]: 1.00  
Fatt. inclinazione del carico [iqY]: 1.00 Fatt. inclinazione del carico [icY]: 1.00 Fatt. inclinazione del carico [iyY]: 1.00  
Fattore di forma [sq]: 1.00 Fattore di forma [sc]: 1.00 Fattore di forma [sy]: 1.00  
Fattore di profondità [dq]: 0.00 Fattore di profondità [dc]: 0.00 Fattore di profondità [dy]: 0.00  
Coefficiente correttivo [eyk]: 0.00 Coefficiente correttivo [eyiX]: 0.00 Coefficiente correttivo [eyiY]: 0.00

### Verifica della capacità portante

QUlt: 351.045 kN/m<sup>2</sup>  
Max pressione suolo: 22.826 kN/m<sup>2</sup>  
Indice di resistenza: 0.20

Combinazione: 9 Descrizione: **Frequente eccentrica** azione sismica **ASSENTE**

### Coefficienti parziali $\gamma_M$ di sicurezza per i parametri geotecnici del terreno

Tangente angolo res. taglio: 1.00  
Coesione efficace: 1.00  
Resistenza non drenata: 1.00  
Peso dell'unità di volume: 1.00

Coeff. sicurezza SLE: 3.0

Fattore Nq: 10.66 Fattore Nc: 20.72 Fattore Ny: 9.01  
Fatt. inclinazione del carico [iqX]: 1.00 Fatt. inclinazione del carico [icX]: 1.00 Fatt. inclinazione del carico [iyX]: 1.00  
Fatt. inclinazione del carico [iqY]: 1.00 Fatt. inclinazione del carico [icY]: 1.00 Fatt. inclinazione del carico [iyY]: 1.00  
Fattore di forma [sq]: 1.00 Fattore di forma [sc]: 1.00 Fattore di forma [sy]: 1.00  
Fattore di profondità [dq]: 0.00 Fattore di profondità [dc]: 0.00 Fattore di profondità [dy]: 0.00  
Coefficiente correttivo [eyk]: 0.00 Coefficiente correttivo [eyiX]: 0.00 Coefficiente correttivo [eyiY]: 0.00

### Verifica della capacità portante

QUlt: 351.045 kN/m<sup>2</sup>  
Max pressione suolo: 20.150 kN/m<sup>2</sup>  
Indice di resistenza: 0.17

Combinazione: 10 Descrizione: **Quasi permanente eccentrica** azione sismica **ASSENTE**

### Coefficienti parziali $\gamma_M$ di sicurezza per i parametri geotecnici del terreno

Tangente angolo res. taglio: 1.00  
Coesione efficace: 1.00  
Resistenza non drenata: 1.00  
Peso dell'unità di volume: 1.00

Coeff. sicurezza SLE: 3.0

Fattore Nq: 10.66 Fattore Nc: 20.72 Fattore Ny: 9.01  
Fatt. inclinazione del carico [iqX]: 1.00 Fatt. inclinazione del carico [icX]: 1.00 Fatt. inclinazione del carico [iyX]: 1.00  
Fatt. inclinazione del carico [iqY]: 1.00 Fatt. inclinazione del carico [icY]: 1.00 Fatt. inclinazione del carico [iyY]: 1.00  
Fattore di forma [sq]: 1.00 Fattore di forma [sc]: 1.00 Fattore di forma [sy]: 1.00

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Fattore di profondita' [dq]: 0.00 Fattore di profondita' [dc]: 0.00 Fattore di profondita' [dy]: 0.00  
Coefficiente correttivo [eyk]: 0.00 Coefficiente correttivo [eyiX]: 0.00 Coefficiente correttivo [eyiY]: 0.00

#### Verifica della capacità portante

Qult: 351.045 kN/m<sup>2</sup>  
Max pressione suolo: 19.837 kN/m<sup>2</sup>  
Indice di resistenza: 0.17

Combinazione: 11 Descrizione: tiro azione sismica **ASSENTE**

#### Coefficienti parziali γM di sicurezza per i parametri geotecnici del terreno

Tangente angolo res. taglio: 1.00  
Coesione efficace: 1.00  
Resistenza non drenata: 1.00  
Peso dell'unità di volume: 1.00

Coeff. sicurezza SLE: 3.0

Fattore Nq: 10.66 Fattore Nc: 20.72 Fattore Ny: 9.01  
Fatt. inclinazione del carico [iqX]: 1.00 Fatt. inclinazione del carico [icX]: 1.00 Fatt. inclinazione del carico [iyX]: 1.00  
Fatt. inclinazione del carico [iqY]: 1.00 Fatt. inclinazione del carico [icY]: 1.00 Fatt. inclinazione del carico [iyY]: 1.00  
Fattore di forma [sq]: 1.00 Fattore di forma [sc]: 1.00 Fattore di forma [sy]: 1.00  
Fattore di profondita' [dq]: 0.00 Fattore di profondita' [dc]: 0.00 Fattore di profondita' [dy]: 0.00  
Coefficiente correttivo [eyk]: 0.00 Coefficiente correttivo [eyiX]: 0.00 Coefficiente correttivo [eyiY]: 0.00

#### Verifica della capacità portante

Qult: 351.045 kN/m<sup>2</sup>  
Max pressione suolo: 1.762 kN/m<sup>2</sup>  
Indice di resistenza: 0.02

### 2.2 VERIFICHE

#### 2.2.1 VERIFICHE ELEMENTI DI COPERTURA FABBRICATO ESISTENTE

Di seguito si riportano le verifiche degli elementi del solaio di copertura che dovranno essere sostituiti in caso vi sia un riscontro di cedimenti , rotture e ammaloramenti. L'intervento strutturalmente si configura come intervento locale di riparazione.

2.2.1.1 TRAVETTI

Si considera che la luce massima di lavoro dell'orditura secondari è pari a 2,00 m, il passo massimo dei travetti è pari a 90 cm.

Verifica trave in legno in semplice appoggio. Travetto conifere						
<b>Geometria</b>						
b=	8	cm	A=	96.00	cm <sup>2</sup>	
h=	12	cm	At=	64.000	cm <sup>2</sup>	
l=	200	cm	I <sub>x</sub> =	1152	cm <sup>4</sup>	
I <sub>influenza</sub> =	90	cm	I <sub>y</sub> =	512.000	cm <sup>4</sup>	
α=	0	°	W <sub>x</sub> =	192.000	cm <sup>3</sup>	α - angolo di inclinazione della sezione
β=	19	°	W <sub>y</sub> =	128.000	cm <sup>3</sup>	β - angolo di inclinazione dell'asse
			ρI=	3.744	daN/m	
<b>Carichi</b>						
q <sub>G</sub> =	110.0	daN/mq	Classe di durata	Permanente		
q <sub>Q</sub> =	120.0	daN/mq	Classe di durata	Breve		
<b>Materiale</b>						
Tipologia legno	Conifere/Pioppo		f <sub>m</sub> k=	200.0	daN/cm <sup>2</sup>	
Classe di resistenza	C20		f <sub>k</sub> =	22.0	daN/cm <sup>2</sup>	
Classe di servizio	2		E <sub>0,mean</sub> =	95000.0	daN/cm <sup>2</sup>	
				k <sub>G,def</sub> =	0.80	
Normativa	CNR DT 206/2006		k <sub>mod</sub> =	0.90		
				k <sub>Q,def</sub> =	0.80	
<b>Verifica allo stato limite ultimo</b>						
σ <sub>d</sub> =	75.32	daN/cm <sup>2</sup>	Verifica soddisfatta	M <sub>sd</sub> =	145.35 daNm	
τ <sub>d</sub> =	4.52	daN/cm <sup>2</sup>	Verifica soddisfatta	V <sub>sd</sub> =	290.70 daN	
<b>Verifica allo stato limite di esercizio</b>						
u <sub>G,ist</sub> =	0.18	cm				
u <sub>Q,ist</sub> =	0.19	cm	<l/300=	0.67	cm	
					Verifica soddisfatta	
u <sub>G,fin</sub> =	0.33	cm				
u <sub>Q,fin</sub> =	0.35	cm	<l/200	1.00	cm	
					Verifica soddisfatta	
u <sub>net,fin</sub> =	0.68	cm	<l/250=	0.80	cm	
					Verifica soddisfatta	

Verifica trave in legno in semplice appoggio. Travetto latifoglie								
<b>Geometria</b>								
b=	8	cm	A=	96.00	cm <sup>2</sup>			
h=	12	cm	At=	64.000	cm <sup>2</sup>			
l=	200	cm	I <sub>x</sub> =	1152	cm <sup>4</sup>			
I <sub>influenza</sub> =	90	cm	I <sub>y</sub> =	512.000	cm <sup>4</sup>			
α=	0	°	W <sub>x</sub> =	192.000	cm <sup>3</sup>	α - angolo di inclinazione della sezione		
β=	19	°	W <sub>y</sub> =	128.000	cm <sup>3</sup>	β - angolo di inclinazione dell'asse		
			ρI=	6.144	daN/m			
<b>Carichi</b>								
q <sub>G</sub> =	110.0	daN/mq	Classe di durata	Permanente				
q <sub>Q</sub> =	120.0	daN/mq	Classe di durata	Breve ▼				
<b>Materiale</b>								
Tipologia legno	Latifoglie ▼		f <sub>mk</sub> =	300.0	daN/cm <sup>2</sup>	f <sub>md</sub> =	207.7	daN/cm <sup>2</sup>
Classe di resistenza	D30 ▼		f <sub>vk</sub> =	30.0	daN/cm <sup>2</sup>	f <sub>vd</sub> =	20.77	daN/cm <sup>2</sup>
Classe di servizio	2 ▼		E <sub>0,mean</sub> =	100000.0	daN/cm <sup>2</sup>			
						k <sub>G,def</sub> =	0.80	
Normativa	CNR DT 206/2006 ▼		k <sub>mod</sub> =	0.90		k <sub>Q,def</sub> =	0.80	
<b>Verifica allo stato limite ultimo</b>								
σ <sub>d</sub> =	76.14	daN/cm <sup>2</sup>	Verifica soddisfatta			M <sub>sd</sub> =	145.35	daNm
τ <sub>d</sub> =	4.57	daN/cm <sup>2</sup>	Verifica soddisfatta			V <sub>sd</sub> =	290.70	daN
<b>Verifica allo stato limite di esercizio</b>								
u <sub>G,ist</sub> =	0.18	cm						
u <sub>Q,ist</sub> =	0.18	cm	<l/300=	0.67	cm	Verifica soddisfatta		
u <sub>G,fin</sub> =	0.32	cm						
u <sub>Q,fin</sub> =	0.33	cm	<l/200	1.00	cm	Verifica soddisfatta		
u <sub>net,fin</sub> =	0.66	cm	<l/250=	0.80	cm	Verifica soddisfatta		

2.2.1.2 TERZERE

Si considera che la luce massima di lavoro delle terzere è pari a 4,50 m, il passo massimo dei travetti è pari a 2,00 m.

Verifica terzere in legno di conifere						
<b>Geometria</b>						
b=	25	cm	A=	625.00	cm <sup>2</sup>	
h=	25	cm	At=	416.667	cm <sup>2</sup>	
l=	450	cm	I <sub>x</sub> =	32552.08	cm <sup>4</sup>	
I <sub>influenza</sub> =	200	cm	I <sub>y</sub> =	32552.083	cm <sup>4</sup>	
α=	19	°	W <sub>x</sub> =	2604.167	cm <sup>3</sup>	α - angolo di inclinazione della sezione
β=	0	°	W <sub>y</sub> =	2604.167	cm <sup>3</sup>	β - angolo di inclinazione dell'asse
			ρI=	24.375	daN/m	
<b>Carichi</b>						
q <sub>G</sub> =	120.0	daN/mq	Classe di durata	Permanente		
q <sub>Q</sub> =	120.0	daN/mq	Classe di durata	Breve ▼		
<b>Materiale</b>						
Tipologia legno	Conifere/Pioppo ▼		f <sub>mk</sub> =	200.0	daN/cm <sup>2</sup>	
Classe di resistenza	C20 ▼		f <sub>vk</sub> =	22.0	daN/cm <sup>2</sup>	
Classe di servizio	2 ▼		E <sub>0,mean</sub> =	95000.0	daN/cm <sup>2</sup>	
				k <sub>G,def</sub> =	0.80	
Normativa	CNR DT 206/2006 ▼		k <sub>mod</sub> =	0.90	k <sub>Q,def</sub> = 0.80	
<b>Verifica allo stato limite ultimo</b>						
σ <sub>d</sub> =	83.28	daN/cm <sup>2</sup>	Verifica soddisfatta		M <sub>sd</sub> = 1701.00 daNm	
τ <sub>d</sub> =	3.94	daN/cm <sup>2</sup>	Verifica soddisfatta		V <sub>sd</sub> = 1512.00 daN	
<b>Verifica allo stato limite di esercizio</b>						
u <sub>G,ist</sub> =	0.46	cm				
u <sub>Q,ist</sub> =	0.41	cm	<l/300=	1.50	cm Verifica soddisfatta	
u <sub>G,fin</sub> =	0.82	cm				
u <sub>Q,fin</sub> =	0.75	cm	<l/200	2.25	cm Verifica soddisfatta	
u <sub>net,fin</sub> =	1.57	cm	<l/250=	1.80	cm Verifica soddisfatta	

## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Verifica terzere in legno di latifoglie								
<b>Geometria</b>								
b=	25	cm	A=	625.00	cm <sup>2</sup>			
h=	25	cm	At=	416.667	cm <sup>2</sup>			
l=	450	cm	I <sub>x</sub> =	32552.08	cm <sup>4</sup>			
I <sub>influenza</sub> =	200	cm	I <sub>y</sub> =	32552.083	cm <sup>4</sup>			
α=	19	°	W <sub>x</sub> =	2604.167	cm <sup>3</sup>	α - angolo di inclinazione della sezione		
β=	0	°	W <sub>y</sub> =	2604.167	cm <sup>3</sup>	β - angolo di inclinazione dell'asse		
			ρ <sub>l</sub> =	40.000	daN/m			
<b>Carichi</b>								
q <sub>G</sub> =	120.0	daN/mq	Classe di durata	Permanente				
q <sub>Q</sub> =	120.0	daN/mq	Classe di durata	Breve ▼				
<b>Materiale</b>								
Tipologia legno	Latifoglie ▼		f <sub>m</sub> k=	300.0	daN/cm <sup>2</sup>	f <sub>m</sub> d=	207.7	daN/cm <sup>2</sup>
Classe di resistenza	D30 ▼		f <sub>k</sub> =	30.0	daN/cm <sup>2</sup>	f <sub>d</sub> =	20.77	daN/cm <sup>2</sup>
Classe di servizio	2 ▼		E <sub>0,mean</sub> =	100000.0	daN/cm <sup>2</sup>			
						k <sub>G,def</sub> =	0.80	
Normativa	CNR DT 206/2006 ▼		k <sub>mod</sub> =	0.90		k <sub>Q,def</sub> =	0.80	
<b>Verifica allo stato limite ultimo</b>								
σ <sub>d</sub> =	85.77	daN/cm <sup>2</sup>	Verifica soddisfatta		M <sub>sd</sub> =	1701.00	daNm	
τ <sub>d</sub> =	4.06	daN/cm <sup>2</sup>	Verifica soddisfatta		V <sub>sd</sub> =	1512.00	daN	
<b>Verifica allo stato limite di esercizio</b>								
u <sub>G,ist</sub> =	0.46	cm						
u <sub>Q,ist</sub> =	0.39	cm	<l/300=	1.50	cm	Verifica soddisfatta		
u <sub>G,fin</sub> =	0.83	cm						
u <sub>Q,fin</sub> =	0.71	cm	<l/200	2.25	cm	Verifica soddisfatta		
u <sub>net,fin</sub> =	1.54	cm	<l/250=	1.80	cm	Verifica soddisfatta		



2.2.1.3 PUNTONI

Si considera che la luce massima di lavoro delle travi inclinate è pari a 4,00 m, il passo massimo l'interasse risulta pari a 4,50m.

Verifica trave puntone confere						
<b>Geometria</b>						
b=	25	cm	A=	625.00	cm <sup>2</sup>	
h=	25	cm	At=	416.667	cm <sup>2</sup>	
l=	400	cm	I <sub>x</sub> =	32552.0833	cm <sup>4</sup>	
I <sub>influenza</sub> =	450	cm	I <sub>y</sub> =	32552.083	cm <sup>4</sup>	
α=	0	°	W <sub>x</sub> =	2604.167	cm <sup>3</sup>	α - angolo di inclinazione della sezione
β=	19	°	W <sub>y</sub> =	2604.167	cm <sup>3</sup>	β - angolo di inclinazione dell'asse
			ρI=	24.375	daN/m	
<b>Carichi</b>						
q <sub>G</sub> =	120.0	daN/mq	Classe di durata	Media		
q <sub>Q</sub> =	120.0	daN/mq	Classe di durata	Breve		
<b>Materiale</b>						
Tipologia legno	Conifere/Pioppo		f <sub>mk</sub> =	200.0	daN/cm <sup>2</sup>	
Classe di resistenza	C20		f <sub>k</sub> =	22.0	daN/cm <sup>2</sup>	
Classe di servizio	2		E <sub>0,mean</sub> =	95000.0	daN/cm <sup>2</sup>	
					k <sub>G,def</sub> = 0.80	
Normativa	EC5		k <sub>mod</sub> =	0.90	k <sub>Q,def</sub> = 0.00	
<b>Verifica allo stato limite ultimo</b>						
σ <sub>d</sub> =	116.20	daN/cm <sup>2</sup>	Verifica soddisfatta	M <sub>sd</sub> =	3024.00 daNm	
τ <sub>d</sub> =	7.26	daN/cm <sup>2</sup>	Verifica soddisfatta	V <sub>sd</sub> =	3024.00 daN	
<b>Verifica allo stato limite di esercizio</b>						
u <sub>G,ist</sub> =	0.58	cm				
u <sub>Q,ist</sub> =	0.55	cm	<l/300=	1.33 cm	Verifica soddisfatta	
u <sub>G,fin</sub> =	1.04	cm				
u <sub>Q,fin</sub> =	0.55	cm				
u <sub>net,fin</sub> =	1.59	cm	<l/250=	1.60 cm	Verifica soddisfatta	

## Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Verifica trave puntone latifoglie								
<b>Geometria</b>								
b=	25	cm	A=	625.00	cm <sup>2</sup>			
h=	25	cm	At=	416.667	cm <sup>2</sup>			
l=	400	cm	I <sub>x</sub> =	32552.0833	cm <sup>4</sup>			
I <sub>influenza</sub> =	450	cm	I <sub>y</sub> =	32552.083	cm <sup>4</sup>			
α=	0	°	W <sub>x</sub> =	2604.167	cm <sup>3</sup>	α - angolo di inclinazione della sezione		
β=	19	°	W <sub>y</sub> =	2604.167	cm <sup>3</sup>	β - angolo di inclinazione dell'asse		
			ρI=	40.000	daN/m			
<b>Carichi</b>								
q <sub>G</sub> =	120.0	daN/mq	Classe di durata	Media				
q <sub>Q</sub> =	120.0	daN/mq	Classe di durata	Breve ▼				
<b>Materiale</b>								
Tipologia legno	Latifoglie ▼		f <sub>mk</sub> =	300.0	daN/cm <sup>2</sup>	f <sub>md</sub> =	200.0	daN/cm <sup>2</sup>
Classe di resistenza	D30 ▼		f <sub>vk</sub> =	30.0	daN/cm <sup>2</sup>	f <sub>vd</sub> =	20.00	daN/cm <sup>2</sup>
Classe di servizio	2 ▼		E <sub>0,mean</sub> =	100000.0	daN/cm <sup>2</sup>			
						k <sub>G,def</sub> =	0.80	
Normativa	EC5 ▼		k <sub>mod</sub> =	0.90		k <sub>Q,def</sub> =	0.00	
<b>Verifica allo stato limite ultimo</b>								
σ <sub>d</sub> =	117.79	daN/cm <sup>2</sup>	Verifica soddisfatta			M <sub>sd</sub> =	3024.00	daNm
τ <sub>d</sub> =	7.36	daN/cm <sup>2</sup>	Verifica soddisfatta			V <sub>sd</sub> =	3024.00	daN
<b>Verifica allo stato limite di esercizio</b>								
u <sub>G,ist</sub> =	0.56	cm						
u <sub>Q,ist</sub> =	0.52	cm	<l/300=	1.33	cm	<b>Verifica soddisfatta</b>		
u <sub>G,fin</sub> =	1.01	cm						
u <sub>Q,fin</sub> =	0.52	cm						
u <sub>net,fin</sub> =	1.53	cm	<l/250=	1.60	cm	<b>Verifica soddisfatta</b>		



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							
1A	0	-57.038	0.612	0.812	-0.535	1.625	-0.839	1	0.01	0.04	0.02	
1B	0	-57.038	1.568	0.812	-0.535	1.625	-2.319	1	0.01	0.04	0.04	
1C	0	-57.038	0.612	-0.212	-0.535	-0.308	-0.839	1	0.01	0.04	0.01	
1D	0	-57.038	1.568	-0.212	-0.535	-0.308	-2.319	1	0.01	0.04	0.03	
1E	0	-48.763	0.612	0.812	-0.535	1.625	-0.839	1	0.01	0.03	0.02	
1F	0	-48.763	1.568	0.812	-0.535	1.625	-2.319	1	0.01	0.03	0.04	
1G	0	-48.763	0.612	-0.212	-0.535	-0.308	-0.839	1	0.01	0.03	0.01	
1H	0	-48.763	1.568	-0.212	-0.535	-0.308	-2.319	1	0.01	0.03	0.03	
1I	0	-58.022	0.611	1.077	-0.813	2.073	-0.831	1	0.01	0.04	0.03	
1J	0	-58.022	1.569	1.077	-0.813	2.073	-2.327	1	0.01	0.04	0.04	
1K	0	-58.022	0.611	-0.477	-0.813	-0.756	-0.831	1	0.01	0.04	0.01	
1L	0	-58.022	1.569	-0.477	-0.813	-0.756	-2.327	1	0.01	0.04	0.03	
1M	0	-47.778	0.611	1.077	-0.813	2.073	-0.831	1	0.01	0.03	0.03	
1N	0	-47.778	1.569	1.077	-0.813	2.073	-2.327	1	0.01	0.03	0.04	
1O	0	-47.778	0.611	-0.477	-0.813	-0.756	-0.831	1	0.01	0.03	0.01	
1P	0	-47.778	1.569	-0.477	-0.813	-0.756	-2.327	1	0.01	0.03	0.03	
2	0	-92.520	3.494	0.556	-0.280	1.186	-5.342	1	0.01	0.07	0.07	
7	0	-72.880	3.145	-0.412	-0.371	-0.809	-4.767	1	0.01	0.05	0.06	
1A	196	-56.273	0.359	0.812	-0.535	0.023	0.109	1	0.01	0.04	0.00	
1B	196	-56.273	1.315	0.812	-0.535	0.023	0.501	1	0.01	0.04	0.01	
1C	196	-56.273	0.359	-0.212	-0.535	0.120	0.109	1	0.01	0.04	0.00	
1D	196	-56.273	1.315	-0.212	-0.535	0.120	0.501	1	0.01	0.04	0.01	
1E	196	-47.998	0.359	0.812	-0.535	0.023	0.109	1	0.01	0.03	0.00	
1F	196	-47.998	1.315	0.812	-0.535	0.023	0.501	1	0.01	0.03	0.01	
1G	196	-47.998	0.359	-0.212	-0.535	0.120	0.109	1	0.01	0.03	0.00	
1H	196	-47.998	1.315	-0.212	-0.535	0.120	0.501	1	0.01	0.03	0.01	
1I	196	-57.257	0.358	1.077	-0.813	-0.073	0.117	1	0.01	0.04	0.00	
1J	196	-57.257	1.316	1.077	-0.813	-0.073	0.494	1	0.01	0.04	0.01	
1K	196	-57.257	0.358	-0.477	-0.813	0.216	0.117	1	0.01	0.04	0.00	
1L	196	-57.257	1.316	-0.477	-0.813	0.216	0.494	1	0.01	0.04	0.01	
1M	196	-47.013	0.358	1.077	-0.813	-0.073	0.117	1	0.01	0.03	0.00	
1N	196	-47.013	1.316	1.077	-0.813	-0.073	0.494	1	0.01	0.03	0.01	
1O	196	-47.013	0.358	-0.477	-0.813	0.216	0.117	1	0.01	0.03	0.00	
1P	196	-47.013	1.316	-0.477	-0.813	0.216	0.494	1	0.01	0.03	0.01	
2	196	-91.525	3.165	0.556	-0.280	0.098	1.169	1	0.01	0.07	0.02	
7	196	-71.885	2.816	-0.412	-0.371	-0.003	1.062	1	0.01	0.05	0.01	
1A	391	-55.508	0.106	0.812	-0.535	-1.580	0.564	1	0.01	0.04	0.02	
1B	391	-55.508	1.062	0.812	-0.535	-1.580	2.827	1	0.01	0.04	0.04	
1C	391	-55.508	0.106	-0.212	-0.535	0.547	0.564	1	0.01	0.04	0.01	
1D	391	-55.508	1.062	-0.212	-0.535	0.547	2.827	1	0.01	0.04	0.04	
1E	391	-47.232	0.106	0.812	-0.535	-1.580	0.564	1	0.01	0.03	0.02	
1F	391	-47.232	1.062	0.812	-0.535	-1.580	2.827	1	0.01	0.03	0.04	
1G	391	-47.232	0.106	-0.212	-0.535	0.547	0.564	1	0.01	0.03	0.01	
1H	391	-47.232	1.062	-0.212	-0.535	0.547	2.827	1	0.01	0.03	0.04	
1I	391	-56.492	0.105	1.077	-0.813	-2.220	0.570	1	0.01	0.04	0.03	
1J	391	-56.492	1.063	1.077	-0.813	-2.220	2.820	1	0.01	0.04	0.05	
1K	391	-56.492	0.105	-0.477	-0.813	1.188	0.570	1	0.01	0.04	0.02	
1L	391	-56.492	1.063	-0.477	-0.813	1.188	2.820	1	0.01	0.04	0.04	
1M	391	-46.248	0.105	1.077	-0.813	-2.220	0.570	1	0.01	0.03	0.03	
1N	391	-46.248	1.063	1.077	-0.813	-2.220	2.820	1	0.01	0.03	0.05	
1O	391	-46.248	0.105	-0.477	-0.813	1.188	0.570	1	0.01	0.03	0.02	
1P	391	-46.248	1.063	-0.477	-0.813	1.188	2.820	1	0.01	0.03	0.04	
2	391	-90.530	2.836	0.556	-0.280	-0.990	7.038	1	0.01	0.06	0.09	
7	391	-70.890	2.488	-0.412	-0.371	0.803	6.249	1	0.01	0.05	0.08	

MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
--		cm	kN*m		cm			
2	--	391	7.038	0.09	--	--	--	
--	Rara	156	0.156	--	175	0.00	1 / 90037	
--	Freq.	156	0.156	--	175	0.00	1 / 90037	
--	Q.Perm.	156	0.156	--	175	0.00	1 / 90037	
--	Rara	156	0.156	--	175	0.00	1 / 90037	
--	Freq.	156	0.156	--	175	0.00	1 / 90037	
--	Q.Perm.	156	0.156	--	175	0.00	1 / 90037	
--	Rara	156	0.156	--	175	0.00	1 / 90037	

**ASTA NUM. 18** NI 142 NF 27 Lungh. 104.3 cm SEZ. 2 Cc D= 0.180 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.13 0.13 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							
1A	0	-54.589	-4.439	0.707	0.776	-0.039	2.645	1	0.01	0.04	0.03	
1B	0	-54.589	-0.709	0.707	0.776	-0.039	0.263	1	0.01	0.04	0.00	
1C	0	-54.589	-4.439	-1.316	0.776	-2.323	2.645	1	0.01	0.04	0.05	
1D	0	-54.589	-0.709	-1.316	0.776	-2.323	0.263	1	0.01	0.04	0.03	
1E	0	-46.372	-4.439	0.707	0.776	-0.039	2.645	1	0.01	0.03	0.03	
1F	0	-46.372	-0.709	0.707	0.776	-0.039	0.263	1	0.01	0.03	0.00	
1G	0	-46.372	-4.439	-1.316	0.776	-2.323	2.645	1	0.01	0.03	0.05	
1H	0	-46.372	-0.709	-1.316	0.776	-2.323	0.263	1	0.01	0.03	0.03	
1I	0	-55.703	-4.405	1.253	1.792	0.868	2.558	1	0.03	0.04	0.04	
1J	0	-55.703	-0.743	1.253	1.792	0.868	0.350	1	0.03	0.04	0.01	
1K	0	-55.703	-4.405	-1.862	1.792	-3.230	2.558	1	0.03	0.04	0.05	
1L	0	-55.703	-0.743	-1.862	1.792	-3.230	0.350	1	0.03	0.04	0.04	
1M	0	-45.257	-4.405	1.253	1.792	0.868	2.558	1	0.03	0.03	0.04	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1N	0	-45.257	-0.743	1.253	1.792	0.868	0.350	1	0.03	0.03	0.01
1O	0	-45.257	-4.405	-1.862	1.792	-3.230	2.558	1	0.03	0.03	0.05
1P	0	-45.257	-0.743	-1.862	1.792	-3.230	0.350	1	0.03	0.03	0.04
2	0	-85.780	-11.460	-0.551	0.171	-2.159	5.789	1	0.02	0.06	0.08
7	0	-66.470	-11.070	-0.695	0.518	-3.718	5.396	1	0.02	0.05	0.09
1A	52	-54.389	-4.507	0.707	0.776	-0.054	0.290	1	0.01	0.04	0.00
1B	52	-54.389	-0.776	0.707	0.776	-0.054	-0.103	1	0.01	0.04	0.00
1C	52	-54.389	-4.507	-1.316	0.776	-1.990	0.290	1	0.01	0.04	0.03
1D	52	-54.389	-0.776	-1.316	0.776	-1.990	-0.103	1	0.01	0.04	0.03
1E	52	-46.172	-4.507	0.707	0.776	-0.054	0.290	1	0.01	0.03	0.00
1F	52	-46.172	-0.776	0.707	0.776	-0.054	-0.103	1	0.01	0.03	0.00
1G	52	-46.172	-4.507	-1.316	0.776	-1.990	0.290	1	0.01	0.03	0.03
1H	52	-46.172	-0.776	-1.316	0.776	-1.990	-0.103	1	0.01	0.03	0.03
1I	52	-55.503	-4.472	1.253	1.792	1.006	0.234	1	0.03	0.04	0.01
1J	52	-55.503	-0.811	1.253	1.792	1.006	-0.047	1	0.03	0.04	0.01
1K	52	-55.503	-4.472	-1.862	1.792	-3.050	0.234	1	0.03	0.04	0.04
1L	52	-55.503	-0.811	-1.862	1.792	-3.050	-0.047	1	0.03	0.04	0.04
1M	52	-45.057	-4.472	1.253	1.792	1.006	0.234	1	0.03	0.03	0.01
1N	52	-45.057	-0.811	1.253	1.792	1.006	-0.047	1	0.03	0.03	0.01
1O	52	-45.057	-4.472	-1.862	1.792	-3.050	0.234	1	0.03	0.03	0.04
1P	52	-45.057	-0.811	-1.862	1.792	-3.050	-0.047	1	0.03	0.03	0.04
2	52	-85.515	-11.545	-0.551	0.171	-1.872	-0.211	1	0.02	0.06	0.02
7	52	-66.205	-11.160	-0.695	0.518	-3.356	-0.403	1	0.02	0.05	0.04
1A	104	-54.189	-4.574	0.707	0.776	-0.069	-2.099	1	0.01	0.04	0.03
1B	104	-54.189	-0.844	0.707	0.776	-0.069	-0.505	1	0.01	0.04	0.01
1C	104	-54.189	-4.574	-1.316	0.776	-1.657	-2.099	1	0.01	0.04	0.04
1D	104	-54.189	-0.844	-1.316	0.776	-1.657	-0.505	1	0.01	0.04	0.02
1E	104	-45.972	-4.574	0.707	0.776	-0.069	-2.099	1	0.01	0.03	0.03
1F	104	-45.972	-0.844	0.707	0.776	-0.069	-0.505	1	0.01	0.03	0.01
1G	104	-45.972	-4.574	-1.316	0.776	-1.657	-2.099	1	0.01	0.03	0.04
1H	104	-45.972	-0.844	-1.316	0.776	-1.657	-0.505	1	0.01	0.03	0.02
1I	104	-55.303	-4.540	1.253	1.792	1.144	-2.125	1	0.03	0.04	0.03
1J	104	-55.303	-0.878	1.253	1.792	1.144	-0.479	1	0.03	0.04	0.02
1K	104	-55.303	-4.540	-1.862	1.792	-2.870	-2.125	1	0.03	0.04	0.05
1L	104	-55.303	-0.878	-1.862	1.792	-2.870	-0.479	1	0.03	0.04	0.04
1M	104	-44.857	-4.540	1.253	1.792	1.144	-2.125	1	0.03	0.03	0.03
1N	104	-44.857	-0.878	1.253	1.792	1.144	-0.479	1	0.03	0.03	0.02
1O	104	-44.857	-4.540	-1.862	1.792	-2.870	-2.125	1	0.03	0.03	0.05
1P	104	-44.857	-0.878	-1.862	1.792	-2.870	-0.479	1	0.03	0.03	0.04
2	104	-85.250	-11.630	-0.551	0.171	-1.584	-6.257	1	0.02	0.06	0.09
7	104	-65.940	-11.250	-0.695	0.518	-2.993	-6.248	1	0.02	0.05	0.09

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m			cm		
2	--	0	5.789	0.08	--	--	--	--
--	Rara	104	0.042	--	43	-0.00	1 / 99999	
--	Freq.	104	0.042	--	43	-0.00	1 / 99999	
--	Q.Perm.	104	0.042	--	43	-0.00	1 / 99999	
--	Rara	104	0.042	--	43	-0.00	1 / 99999	
--	Freq.	104	0.042	--	43	-0.00	1 / 99999	
--	Q.Perm.	104	0.042	--	43	-0.00	1 / 99999	
--	Rara	104	0.042	--	43	-0.00	1 / 99999	

**ASTA NUM. 12** NI 27 NF 183 Lungh. 93.6 cm SEZ. 2 Cc D= 0.180 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.13 0.13 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-53.863	-4.844	-0.245	-1.155	0.574	1.846	1	0.02	0.04	0.03	
1B	0	-53.863	-0.870	-0.245	-1.155	0.574	-0.354	1	0.02	0.04	0.01	
1C	0	-53.863	-4.844	-2.007	-1.155	-1.564	1.846	1	0.02	0.04	0.03	
1D	0	-53.863	-0.870	-2.007	-1.155	-1.564	-0.354	1	0.02	0.04	0.02	
1E	0	-43.817	-4.844	-0.245	-1.155	0.574	1.846	1	0.02	0.03	0.03	
1F	0	-43.817	-0.870	-0.245	-1.155	0.574	-0.354	1	0.02	0.03	0.01	
1G	0	-43.817	-4.844	-2.007	-1.155	-1.564	1.846	1	0.02	0.03	0.03	
1H	0	-43.817	-0.870	-2.007	-1.155	-1.564	-0.354	1	0.02	0.03	0.02	
1I	0	-52.466	-4.941	1.005	-2.017	1.929	2.060	1	0.03	0.04	0.04	
1J	0	-52.466	-0.773	1.005	-2.017	1.929	-0.567	1	0.03	0.04	0.03	
1K	0	-52.466	-4.941	-3.257	-2.017	-2.920	2.060	1	0.03	0.04	0.05	
1L	0	-52.466	-0.773	-3.257	-2.017	-2.920	-0.567	1	0.03	0.04	0.04	
1M	0	-45.214	-4.941	1.005	-2.017	1.929	2.060	1	0.03	0.03	0.04	
1N	0	-45.214	-0.773	1.005	-2.017	1.929	-0.567	1	0.03	0.03	0.03	
1O	0	-45.214	-4.941	-3.257	-2.017	-2.920	2.060	1	0.03	0.03	0.05	
1P	0	-45.214	-0.773	-3.257	-2.017	-2.920	-0.567	1	0.03	0.03	0.04	
2	0	-90.170	-7.198	-2.099	-1.209	-0.892	1.171	1	0.02	0.06	0.02	
7	0	-76.290	-4.395	-4.579	-3.014	-0.797	0.222	1	0.04	0.05	0.01	
1A	47	-53.683	-4.904	-0.245	-1.155	1.156	-0.555	1	0.02	0.04	0.02	
1B	47	-53.683	-0.931	-0.245	-1.155	1.156	-0.656	1	0.02	0.04	0.02	
1C	47	-53.683	-4.904	-2.007	-1.155	-1.093	-0.555	1	0.02	0.04	0.02	
1D	47	-53.683	-0.931	-2.007	-1.155	-1.093	-0.656	1	0.02	0.04	0.02	
1E	47	-43.637	-4.904	-0.245	-1.155	1.156	-0.555	1	0.02	0.03	0.02	
1F	47	-43.637	-0.931	-0.245	-1.155	1.156	-0.656	1	0.02	0.03	0.02	
1G	47	-43.637	-4.904	-2.007	-1.155	-1.093	-0.555	1	0.02	0.03	0.02	
1H	47	-43.637	-0.931	-2.007	-1.155	-1.093	-0.656	1	0.02	0.03	0.02	
1I	47	-52.286	-5.001	1.005	-2.017	2.849	-0.310	1	0.03	0.04	0.04	
1J	47	-52.286	-0.834	1.005	-2.017	2.849	-0.900	1	0.03	0.04	0.04	
1K	47	-52.286	-5.001	-3.257	-2.017	-2.785	-0.310	1	0.03	0.04	0.04	
1L	47	-52.286	-0.834	-3.257	-2.017	-2.785	-0.900	1	0.03	0.04	0.04	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1M	47	-45.034	-5.001	1.005	-2.017	2.849	-0.310	1	0.03	0.03	0.04
1N	47	-45.034	-0.834	1.005	-2.017	2.849	-0.900	1	0.03	0.03	0.04
1O	47	-45.034	-5.001	-3.257	-2.017	-2.785	-0.310	1	0.03	0.03	0.04
1P	47	-45.034	-0.834	-3.257	-2.017	-2.785	-0.900	1	0.03	0.03	0.04
2	47	-89.930	-7.277	-2.099	-1.209	0.090	-2.217	1	0.02	0.06	0.03
7	47	-76.050	-4.474	-4.579	-3.014	1.346	-1.854	1	0.04	0.05	0.03
1A	94	-53.503	-4.965	-0.245	-1.155	1.739	-2.984	1	0.02	0.04	0.05
1B	94	-53.503	-0.991	-0.245	-1.155	1.739	-0.986	1	0.02	0.04	0.03
1C	94	-53.503	-4.965	-2.007	-1.155	-0.622	-2.984	1	0.02	0.04	0.04
1D	94	-53.503	-0.991	-2.007	-1.155	-0.622	-0.986	1	0.02	0.04	0.02
1E	94	-43.457	-4.965	-0.245	-1.155	1.739	-2.984	1	0.02	0.03	0.05
1F	94	-43.457	-0.991	-0.245	-1.155	1.739	-0.986	1	0.02	0.03	0.03
1G	94	-43.457	-4.965	-2.007	-1.155	-0.622	-2.984	1	0.02	0.03	0.04
1H	94	-43.457	-0.991	-2.007	-1.155	-0.622	-0.986	1	0.02	0.03	0.02
1I	94	-52.106	-5.062	1.005	-2.017	3.768	-2.708	1	0.03	0.04	0.06
1J	94	-52.106	-0.894	1.005	-2.017	3.768	-1.262	1	0.03	0.04	0.05
1K	94	-52.106	-5.062	-3.257	-2.017	-2.651	-2.708	1	0.03	0.04	0.05
1L	94	-52.106	-0.894	-3.257	-2.017	-2.651	-1.262	1	0.03	0.04	0.04
1M	94	-44.854	-5.062	1.005	-2.017	3.768	-2.708	1	0.03	0.03	0.06
1N	94	-44.854	-0.894	1.005	-2.017	3.768	-1.262	1	0.03	0.03	0.05
1O	94	-44.854	-5.062	-3.257	-2.017	-2.651	-2.708	1	0.03	0.03	0.05
1P	94	-44.854	-0.894	-3.257	-2.017	-2.651	-1.262	1	0.03	0.03	0.04
2	94	-89.690	-7.356	-2.099	-1.209	1.073	-5.642	1	0.02	0.06	0.08
7	94	-75.810	-4.552	-4.579	-3.014	3.490	-3.967	1	0.04	0.05	0.07

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax cm	Mmax kN*m	IR	x fmax. cm	fmax	fmax / l	Nota
I	--	0	2.060	0.03	--	--	--	
--	Rara	0	0.042	--	41	0.00	1 / 99999	
--	Freq.	0	0.042	--	41	0.00	1 / 99999	
--	Q.Perm.	0	0.042	--	41	0.00	1 / 99999	
--	Rara	0	0.042	--	41	0.00	1 / 99999	
--	Freq.	0	0.042	--	41	0.00	1 / 99999	
--	Q.Perm.	0	0.042	--	41	0.00	1 / 99999	
--	Rara	0	0.042	--	41	0.00	1 / 99999	

**ASTA NUM. 13** NI 183 NF 195 Lungh. 73.9 cm SEZ. 6 Cc D= 0.160 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.11 0.11 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-53.373	0.212	0.461	0.254	1.786	-0.394	1	0.00	0.04	0.03	
1B	0	-53.373	0.681	0.461	0.254	1.786	-1.373	1	0.00	0.04	0.04	
1C	0	-53.373	0.212	-0.470	0.254	-1.813	-0.394	1	0.00	0.04	0.03	
1D	0	-53.373	0.681	-0.470	0.254	-1.813	-1.373	1	0.00	0.04	0.04	
1E	0	-39.088	0.212	0.461	0.254	1.786	-0.394	1	0.00	0.03	0.03	
1F	0	-39.088	0.681	0.461	0.254	1.786	-1.373	1	0.00	0.03	0.04	
1G	0	-39.088	0.212	-0.470	0.254	-1.813	-0.394	1	0.00	0.03	0.03	
1H	0	-39.088	0.681	-0.470	0.254	-1.813	-1.373	1	0.00	0.03	0.04	
1I	0	-51.462	0.287	1.210	0.698	5.361	-0.482	1	0.01	0.04	0.09	
1J	0	-51.462	0.605	1.210	0.698	5.361	-1.285	1	0.01	0.04	0.09	
1K	0	-51.462	0.287	-1.220	0.698	-5.387	-0.482	1	0.01	0.04	0.09	
1L	0	-51.462	0.605	-1.220	0.698	-5.387	-1.285	1	0.01	0.04	0.09	
1M	0	-40.998	0.287	1.210	0.698	5.361	-0.482	1	0.01	0.03	0.09	
1N	0	-40.998	0.605	1.210	0.698	5.361	-1.285	1	0.01	0.03	0.09	
1O	0	-40.998	0.287	-1.220	0.698	-5.387	-0.482	1	0.01	0.03	0.09	
1P	0	-40.998	0.605	-1.220	0.698	-5.387	-1.285	1	0.01	0.03	0.09	
2	0	-80.400	0.671	-0.010	0.035	-0.026	-1.525	1	0.00	0.07	0.03	
7	0	-69.570	0.442	-0.043	0.109	-0.132	-0.886	1	0.00	0.06	0.02	
1A	37	-53.243	0.169	0.461	0.254	1.624	-0.312	1	0.00	0.04	0.03	
1B	37	-53.243	0.639	0.461	0.254	1.624	-1.140	1	0.00	0.04	0.03	
1C	37	-53.243	0.169	-0.470	0.254	-1.647	-0.312	1	0.00	0.04	0.03	
1D	37	-53.243	0.639	-0.470	0.254	-1.647	-1.140	1	0.00	0.04	0.03	
1E	37	-38.958	0.169	0.461	0.254	1.624	-0.312	1	0.00	0.03	0.03	
1F	37	-38.958	0.639	0.461	0.254	1.624	-1.140	1	0.00	0.03	0.03	
1G	37	-38.958	0.169	-0.470	0.254	-1.647	-0.312	1	0.00	0.03	0.03	
1H	37	-38.958	0.639	-0.470	0.254	-1.647	-1.140	1	0.00	0.03	0.03	
1I	37	-51.332	0.245	1.210	0.698	4.920	-0.379	1	0.01	0.04	0.08	
1J	37	-51.332	0.563	1.210	0.698	4.920	-1.074	1	0.01	0.04	0.09	
1K	37	-51.332	0.245	-1.220	0.698	-4.943	-0.379	1	0.01	0.04	0.08	
1L	37	-51.332	0.563	-1.220	0.698	-4.943	-1.074	1	0.01	0.04	0.09	
1M	37	-40.868	0.245	1.210	0.698	4.920	-0.379	1	0.01	0.03	0.08	
1N	37	-40.868	0.563	1.210	0.698	4.920	-1.074	1	0.01	0.03	0.09	
1O	37	-40.868	0.245	-1.220	0.698	-4.943	-0.379	1	0.01	0.03	0.08	
1P	37	-40.868	0.563	-1.220	0.698	-4.943	-1.074	1	0.01	0.03	0.09	
2	37	-80.235	0.616	-0.010	0.035	-0.023	-1.287	1	0.00	0.07	0.02	
7	37	-69.405	0.387	-0.043	0.109	-0.116	-0.732	1	0.00	0.06	0.01	
1A	74	-53.113	0.127	0.461	0.254	1.462	-0.246	1	0.00	0.04	0.03	
1B	74	-53.113	0.597	0.461	0.254	1.462	-0.923	1	0.00	0.04	0.03	
1C	74	-53.113	0.127	-0.470	0.254	-1.481	-0.246	1	0.00	0.04	0.03	
1D	74	-53.113	0.597	-0.470	0.254	-1.481	-0.923	1	0.00	0.04	0.03	
1E	74	-38.828	0.127	0.461	0.254	1.462	-0.246	1	0.00	0.03	0.03	
1F	74	-38.828	0.597	0.461	0.254	1.462	-0.923	1	0.00	0.03	0.03	
1G	74	-38.828	0.127	-0.470	0.254	-1.481	-0.246	1	0.00	0.03	0.03	
1H	74	-38.828	0.597	-0.470	0.254	-1.481	-0.923	1	0.00	0.03	0.03	
1I	74	-51.202	0.203	1.210	0.698	4.480	-0.291	1	0.01	0.04	0.08	
1J	74	-51.202	0.521	1.210	0.698	4.480	-0.878	1	0.01	0.04	0.08	
1K	74	-51.202	0.203	-1.220	0.698	-4.499	-0.291	1	0.01	0.04	0.08	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1L	74	-51.202	0.521	-1.220	0.698	-4.499	-0.878	1	0.01	0.04	0.08
1M	74	-40.738	0.203	1.210	0.698	4.480	-0.291	1	0.01	0.03	0.08
1N	74	-40.738	0.521	1.210	0.698	4.480	-0.878	1	0.01	0.03	0.08
1O	74	-40.738	0.203	-1.220	0.698	-4.499	-0.291	1	0.01	0.03	0.08
1P	74	-40.738	0.521	-1.220	0.698	-4.499	-0.878	1	0.01	0.03	0.08
2	74	-80.070	0.562	-0.010	0.035	-0.019	-1.070	1	0.00	0.06	0.02
7	74	-69.240	0.332	-0.043	0.109	-0.101	-0.599	1	0.00	0.06	0.01

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m			cm		
--	--	37	0.000	0.00	--	--	--	
--	Rara	37	0.000	--	31	-0.00	1 / 99999	
--	Freq.	37	0.000	--	31	-0.00	1 / 99999	
--	Q.Perm.	37	0.000	--	31	-0.00	1 / 99999	
--	Rara	37	0.000	--	31	-0.00	1 / 99999	
--	Freq.	37	0.000	--	31	-0.00	1 / 99999	
--	Q.Perm.	37	0.000	--	31	-0.00	1 / 99999	
--	Rara	37	0.000	--	31	-0.00	1 / 99999	

**ASTA NUM. 14** NI 195 NF 196 Lungh. 83.8 cm SEZ. 7 Cc D= 0.140 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.10 0.10 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-53.108	0.154	0.446	0.254	1.462	-0.246	1	0.01	0.05	0.03	
1B	0	-53.108	0.570	0.446	0.254	1.462	-0.923	1	0.01	0.05	0.04	
1C	0	-53.108	0.154	-0.456	0.254	-1.481	-0.246	1	0.01	0.05	0.03	
1D	0	-53.108	0.570	-0.456	0.254	-1.481	-0.923	1	0.01	0.05	0.04	
1E	0	-38.832	0.154	0.446	0.254	1.462	-0.246	1	0.01	0.04	0.03	
1F	0	-38.832	0.570	0.446	0.254	1.462	-0.923	1	0.01	0.04	0.04	
1G	0	-38.832	0.154	-0.456	0.254	-1.481	-0.246	1	0.01	0.04	0.03	
1H	0	-38.832	0.570	-0.456	0.254	-1.481	-0.923	1	0.01	0.04	0.04	
1I	0	-51.202	0.214	1.198	0.698	4.480	-0.291	1	0.02	0.05	0.10	
1J	0	-51.202	0.511	1.198	0.698	4.480	-0.878	1	0.02	0.05	0.10	
1K	0	-51.202	0.214	-1.208	0.698	-4.499	-0.291	1	0.02	0.05	0.10	
1L	0	-51.202	0.511	-1.208	0.698	-4.499	-0.878	1	0.02	0.05	0.10	
1M	0	-40.738	0.214	1.198	0.698	4.480	-0.291	1	0.02	0.04	0.10	
1N	0	-40.738	0.511	1.198	0.698	4.480	-0.878	1	0.02	0.04	0.10	
1O	0	-40.738	0.214	-1.208	0.698	-4.499	-0.291	1	0.02	0.04	0.10	
1P	0	-40.738	0.511	-1.208	0.698	-4.499	-0.878	1	0.02	0.04	0.10	
2	0	-80.070	0.562	-0.010	0.035	-0.019	-1.070	1	0.00	0.07	0.02	
7	0	-69.240	0.333	-0.043	0.109	-0.101	-0.599	1	0.00	0.06	0.01	
1A	42	-52.983	0.113	0.446	0.254	1.286	-0.172	1	0.01	0.05	0.03	
1B	42	-52.983	0.529	0.446	0.254	1.286	-0.711	1	0.01	0.05	0.03	
1C	42	-52.983	0.113	-0.456	0.254	-1.301	-0.172	1	0.01	0.05	0.03	
1D	42	-52.983	0.529	-0.456	0.254	-1.301	-0.711	1	0.01	0.05	0.03	
1E	42	-38.707	0.113	0.446	0.254	1.286	-0.172	1	0.01	0.04	0.03	
1F	42	-38.707	0.529	0.446	0.254	1.286	-0.711	1	0.01	0.04	0.03	
1G	42	-38.707	0.113	-0.456	0.254	-1.301	-0.172	1	0.01	0.04	0.03	
1H	42	-38.707	0.529	-0.456	0.254	-1.301	-0.711	1	0.01	0.04	0.03	
1I	42	-51.077	0.172	1.198	0.698	3.987	-0.204	1	0.02	0.05	0.09	
1J	42	-51.077	0.469	1.198	0.698	3.987	-0.679	1	0.02	0.05	0.09	
1K	42	-51.077	0.172	-1.208	0.698	-4.002	-0.204	1	0.02	0.05	0.09	
1L	42	-51.077	0.469	-1.208	0.698	-4.002	-0.679	1	0.02	0.05	0.09	
1M	42	-40.613	0.172	1.198	0.698	3.987	-0.204	1	0.02	0.04	0.09	
1N	42	-40.613	0.469	1.198	0.698	3.987	-0.679	1	0.02	0.04	0.09	
1O	42	-40.613	0.172	-1.208	0.698	-4.002	-0.204	1	0.02	0.04	0.09	
1P	42	-40.613	0.469	-1.208	0.698	-4.002	-0.679	1	0.02	0.04	0.09	
2	42	-79.910	0.508	-0.010	0.035	-0.015	-0.846	1	0.00	0.07	0.02	
7	42	-69.075	0.279	-0.043	0.109	-0.083	-0.471	1	0.00	0.06	0.01	
1A	84	-52.858	0.071	0.446	0.254	1.110	-0.115	1	0.01	0.05	0.03	
1B	84	-52.858	0.487	0.446	0.254	1.110	-0.516	1	0.01	0.05	0.03	
1C	84	-52.858	0.071	-0.456	0.254	-1.121	-0.115	1	0.01	0.05	0.03	
1D	84	-52.858	0.487	-0.456	0.254	-1.121	-0.516	1	0.01	0.05	0.03	
1E	84	-38.582	0.071	0.446	0.254	1.110	-0.115	1	0.01	0.04	0.03	
1F	84	-38.582	0.487	0.446	0.254	1.110	-0.516	1	0.01	0.04	0.03	
1G	84	-38.582	0.071	-0.456	0.254	-1.121	-0.115	1	0.01	0.04	0.03	
1H	84	-38.582	0.487	-0.456	0.254	-1.121	-0.516	1	0.01	0.04	0.03	
1I	84	-50.952	0.131	1.198	0.698	3.494	-0.134	1	0.02	0.05	0.08	
1J	84	-50.952	0.428	1.198	0.698	3.494	-0.497	1	0.02	0.05	0.08	
1K	84	-50.952	0.131	-1.208	0.698	-3.505	-0.134	1	0.02	0.05	0.08	
1L	84	-50.952	0.428	-1.208	0.698	-3.505	-0.497	1	0.02	0.05	0.08	
1M	84	-40.488	0.131	1.198	0.698	3.494	-0.134	1	0.02	0.04	0.08	
1N	84	-40.488	0.428	1.198	0.698	3.494	-0.497	1	0.02	0.04	0.08	
1O	84	-40.488	0.131	-1.208	0.698	-3.505	-0.134	1	0.02	0.04	0.08	
1P	84	-40.488	0.428	-1.208	0.698	-3.505	-0.497	1	0.02	0.04	0.08	
2	84	-79.750	0.455	-0.010	0.035	-0.011	-0.644	1	0.00	0.07	0.01	
7	84	-68.910	0.225	-0.043	0.109	-0.065	-0.366	1	0.00	0.06	0.01	

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m			cm		
--	--	39	0.006	0.00	--	--	--	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

--	Rara	39	0.004	--	41	0.00	1 / 99999
--	Freq.	39	0.004	--	41	0.00	1 / 99999
--	Q.Perm.	39	0.004	--	41	0.00	1 / 99999
--	Rara	39	0.004	--	41	0.00	1 / 99999
--	Freq.	39	0.004	--	41	0.00	1 / 99999
--	Q.Perm.	39	0.004	--	41	0.00	1 / 99999
--	Rara	39	0.004	--	41	0.00	1 / 99999

**ASTA NUM. 15** NI 196 NF 197 Lungh. 83.8 cm SEZ. 8 Cc D= 0.120 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							
1A	0	-52.853	0.117	0.427	0.254	1.110	-0.115	1	0.01	0.06	0.04	
1B	0	-52.853	0.440	0.427	0.254	1.110	-0.516	1	0.01	0.06	0.04	
1C	0	-52.853	0.117	-0.437	0.254	-1.121	-0.115	1	0.01	0.06	0.04	
1D	0	-52.853	0.440	-0.437	0.254	-1.121	-0.516	1	0.01	0.06	0.04	
1E	0	-38.587	0.117	0.427	0.254	1.110	-0.115	1	0.01	0.04	0.04	
1F	0	-38.587	0.440	0.427	0.254	1.110	-0.516	1	0.01	0.04	0.04	
1G	0	-38.587	0.117	-0.437	0.254	-1.121	-0.115	1	0.01	0.04	0.04	
1H	0	-38.587	0.440	-0.437	0.254	-1.121	-0.516	1	0.01	0.04	0.04	
1I	0	-50.950	0.147	1.180	0.698	3.494	-0.134	1	0.02	0.06	0.11	
1J	0	-50.950	0.411	1.180	0.698	3.494	-0.497	1	0.02	0.06	0.11	
1K	0	-50.950	0.147	-1.190	0.698	-3.505	-0.134	1	0.02	0.06	0.11	
1L	0	-50.950	0.411	-1.190	0.698	-3.505	-0.497	1	0.02	0.06	0.11	
1M	0	-40.490	0.147	1.180	0.698	3.494	-0.134	1	0.02	0.04	0.11	
1N	0	-40.490	0.411	1.180	0.698	3.494	-0.497	1	0.02	0.04	0.11	
1O	0	-40.490	0.147	-1.190	0.698	-3.505	-0.134	1	0.02	0.04	0.11	
1P	0	-40.490	0.411	-1.190	0.698	-3.505	-0.497	1	0.02	0.04	0.11	
2	0	-79.750	0.453	-0.010	0.035	-0.011	-0.644	1	0.00	0.09	0.02	
7	0	-68.910	0.224	-0.043	0.109	-0.065	-0.366	1	0.00	0.08	0.01	
1A	42	-52.748	0.082	0.427	0.254	0.956	-0.053	1	0.01	0.06	0.03	
1B	42	-52.748	0.405	0.427	0.254	0.956	-0.360	1	0.01	0.06	0.03	
1C	42	-52.748	0.082	-0.437	0.254	-0.963	-0.053	1	0.01	0.06	0.03	
1D	42	-52.748	0.405	-0.437	0.254	-0.963	-0.360	1	0.01	0.06	0.03	
1E	42	-38.482	0.082	0.427	0.254	0.956	-0.053	1	0.01	0.04	0.03	
1F	42	-38.482	0.405	0.427	0.254	0.956	-0.360	1	0.01	0.04	0.03	
1G	42	-38.482	0.082	-0.437	0.254	-0.963	-0.053	1	0.01	0.04	0.03	
1H	42	-38.482	0.405	-0.437	0.254	-0.963	-0.360	1	0.01	0.04	0.03	
1I	42	-50.845	0.112	1.180	0.698	3.015	-0.073	1	0.02	0.06	0.09	
1J	42	-50.845	0.376	1.180	0.698	3.015	-0.340	1	0.02	0.06	0.10	
1K	42	-50.845	0.112	-1.190	0.698	-3.022	-0.073	1	0.02	0.06	0.10	
1L	42	-50.845	0.376	-1.190	0.698	-3.022	-0.340	1	0.02	0.06	0.10	
1M	42	-40.385	0.112	1.180	0.698	3.015	-0.073	1	0.02	0.04	0.09	
1N	42	-40.385	0.376	1.180	0.698	3.015	-0.340	1	0.02	0.04	0.10	
1O	42	-40.385	0.112	-1.190	0.698	-3.022	-0.073	1	0.02	0.04	0.10	
1P	42	-40.385	0.376	-1.190	0.698	-3.022	-0.340	1	0.02	0.04	0.10	
2	42	-79.610	0.408	-0.010	0.035	-0.007	-0.464	1	0.00	0.09	0.01	
7	42	-68.775	0.178	-0.043	0.109	-0.047	-0.282	1	0.00	0.08	0.01	
1A	84	-52.643	0.047	0.427	0.254	0.802	-0.005	1	0.01	0.06	0.03	
1B	84	-52.643	0.370	0.427	0.254	0.802	-0.218	1	0.01	0.06	0.03	
1C	84	-52.643	0.047	-0.437	0.254	-0.805	-0.005	1	0.01	0.06	0.03	
1D	84	-52.643	0.370	-0.437	0.254	-0.805	-0.218	1	0.01	0.06	0.03	
1E	84	-38.377	0.047	0.427	0.254	0.802	-0.005	1	0.01	0.04	0.03	
1F	84	-38.377	0.370	0.427	0.254	0.802	-0.218	1	0.01	0.04	0.03	
1G	84	-38.377	0.047	-0.437	0.254	-0.805	-0.005	1	0.01	0.04	0.03	
1H	84	-38.377	0.370	-0.437	0.254	-0.805	-0.218	1	0.01	0.04	0.03	
1I	84	-50.740	0.077	1.180	0.698	2.536	-0.026	1	0.02	0.06	0.08	
1J	84	-50.740	0.341	1.180	0.698	2.536	-0.197	1	0.02	0.06	0.08	
1K	84	-50.740	0.077	-1.190	0.698	-2.538	-0.026	1	0.02	0.06	0.08	
1L	84	-50.740	0.341	-1.190	0.698	-2.538	-0.197	1	0.02	0.06	0.08	
1M	84	-40.280	0.077	1.180	0.698	2.536	-0.026	1	0.02	0.04	0.08	
1N	84	-40.280	0.341	1.180	0.698	2.536	-0.197	1	0.02	0.04	0.08	
1O	84	-40.280	0.077	-1.190	0.698	-2.538	-0.026	1	0.02	0.04	0.08	
1P	84	-40.280	0.341	-1.190	0.698	-2.538	-0.197	1	0.02	0.04	0.08	
2	84	-79.470	0.362	-0.010	0.035	-0.003	-0.302	1	0.00	0.09	0.01	
7	84	-68.640	0.133	-0.043	0.109	-0.029	-0.216	1	0.00	0.08	0.01	

MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
--	--	cm	kN*m		cm			
--	--	42	0.002	0.00	--	--	--	
--	Rara	42	0.002	--	42	0.00	1 / 99999	
--	Freq.	42	0.002	--	42	0.00	1 / 99999	
--	Q.Perm.	42	0.002	--	42	0.00	1 / 99999	
--	Rara	42	0.002	--	42	0.00	1 / 99999	
--	Freq.	42	0.002	--	42	0.00	1 / 99999	
--	Q.Perm.	42	0.002	--	42	0.00	1 / 99999	
--	Rara	42	0.002	--	42	0.00	1 / 99999	

**ASTA NUM. 16** NI 197 NF 198 Lungh. 83.8 cm SEZ. 9 Cc D= 0.100 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.07 0.07 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1A	0	-52.638	0.070	0.407	0.254	0.802	-0.005	1	0.01	0.07	0.04
1B	0	-52.638	0.349	0.407	0.254	0.802	-0.218	1	0.01	0.07	0.04
1C	0	-52.638	0.070	-0.417	0.254	-0.805	-0.005	1	0.01	0.07	0.04
1D	0	-52.638	0.349	-0.417	0.254	-0.805	-0.218	1	0.01	0.07	0.04
1E	0	-38.382	0.070	0.407	0.254	0.802	-0.005	1	0.01	0.05	0.04
1F	0	-38.382	0.349	0.407	0.254	0.802	-0.218	1	0.01	0.05	0.04
1G	0	-38.382	0.070	-0.417	0.254	-0.805	-0.005	1	0.01	0.05	0.04
1H	0	-38.382	0.349	-0.417	0.254	-0.805	-0.218	1	0.01	0.05	0.04
1I	0	-50.739	0.093	1.161	0.698	2.536	-0.026	1	0.04	0.07	0.12
1J	0	-50.739	0.326	1.161	0.698	2.536	-0.197	1	0.04	0.07	0.12
1K	0	-50.739	0.093	-1.170	0.698	-2.538	-0.026	1	0.04	0.07	0.12
1L	0	-50.739	0.326	-1.170	0.698	-2.538	-0.197	1	0.04	0.07	0.12
1M	0	-40.281	0.093	1.161	0.698	2.536	-0.026	1	0.04	0.05	0.12
1N	0	-40.281	0.326	1.161	0.698	2.536	-0.197	1	0.04	0.05	0.12
1O	0	-40.281	0.093	-1.170	0.698	-2.538	-0.026	1	0.04	0.05	0.12
1P	0	-40.281	0.326	-1.170	0.698	-2.538	-0.197	1	0.04	0.05	0.12
2	0	-79.470	0.363	-0.010	0.035	-0.003	-0.302	1	0.00	0.11	0.01
7	0	-68.640	0.134	-0.043	0.109	-0.029	-0.216	1	0.01	0.09	0.01
1A	42	-52.553	0.041	0.407	0.254	0.678	-0.006	1	0.01	0.07	0.03
1B	42	-52.553	0.320	0.407	0.254	0.678	-0.054	1	0.01	0.07	0.03
1C	42	-52.553	0.041	-0.417	0.254	-0.676	-0.006	1	0.01	0.07	0.03
1D	42	-52.553	0.320	-0.417	0.254	-0.676	-0.054	1	0.01	0.07	0.03
1E	42	-38.297	0.041	0.407	0.254	0.678	-0.006	1	0.01	0.05	0.03
1F	42	-38.297	0.320	0.407	0.254	0.678	-0.054	1	0.01	0.05	0.03
1G	42	-38.297	0.041	-0.417	0.254	-0.676	-0.006	1	0.01	0.05	0.03
1H	42	-38.297	0.320	-0.417	0.254	-0.676	-0.054	1	0.01	0.05	0.03
1I	42	-50.654	0.064	1.161	0.698	2.077	-0.003	1	0.04	0.07	0.10
1J	42	-50.654	0.297	1.161	0.698	2.077	-0.057	1	0.04	0.07	0.10
1K	42	-50.654	0.064	-1.170	0.698	-2.075	-0.003	1	0.04	0.07	0.10
1L	42	-50.654	0.297	-1.170	0.698	-2.075	-0.057	1	0.04	0.07	0.10
1M	42	-40.196	0.064	1.161	0.698	2.077	-0.003	1	0.04	0.05	0.10
1N	42	-40.196	0.297	1.161	0.698	2.077	-0.057	1	0.04	0.05	0.10
1O	42	-40.196	0.064	-1.170	0.698	-2.075	-0.003	1	0.04	0.05	0.10
1P	42	-40.196	0.297	-1.170	0.698	-2.075	-0.057	1	0.04	0.05	0.10
2	42	-79.355	0.326	-0.010	0.035	0.001	-0.158	1	0.00	0.11	0.01
7	42	-68.525	0.097	-0.043	0.109	-0.011	-0.168	1	0.01	0.09	0.01
1A	84	-52.468	0.013	0.407	0.254	0.553	-0.018	1	0.01	0.07	0.03
1B	84	-52.468	0.291	0.407	0.254	0.553	0.098	1	0.01	0.07	0.03
1C	84	-52.468	0.013	-0.417	0.254	-0.547	-0.018	1	0.01	0.07	0.03
1D	84	-52.468	0.291	-0.417	0.254	-0.547	0.098	1	0.01	0.07	0.03
1E	84	-38.212	0.013	0.407	0.254	0.553	-0.018	1	0.01	0.05	0.03
1F	84	-38.212	0.291	0.407	0.254	0.553	0.098	1	0.01	0.05	0.03
1G	84	-38.212	0.013	-0.417	0.254	-0.547	-0.018	1	0.01	0.05	0.03
1H	84	-38.212	0.291	-0.417	0.254	-0.547	0.098	1	0.01	0.05	0.03
1I	84	-50.569	0.035	1.161	0.698	1.617	0.008	1	0.04	0.07	0.08
1J	84	-50.569	0.269	1.161	0.698	1.617	0.072	1	0.04	0.07	0.08
1K	84	-50.569	0.035	-1.170	0.698	-1.612	0.008	1	0.04	0.07	0.08
1L	84	-50.569	0.269	-1.170	0.698	-1.612	0.072	1	0.04	0.07	0.08
1M	84	-40.111	0.035	1.161	0.698	1.617	0.008	1	0.04	0.05	0.08
1N	84	-40.111	0.269	1.161	0.698	1.617	0.072	1	0.04	0.05	0.08
1O	84	-40.111	0.035	-1.170	0.698	-1.612	0.008	1	0.04	0.05	0.08
1P	84	-40.111	0.269	-1.170	0.698	-1.612	0.072	1	0.04	0.05	0.08
2	84	-79.240	0.289	-0.010	0.035	0.005	-0.029	1	0.00	0.11	0.00
7	84	-68.410	0.059	-0.043	0.109	0.007	-0.135	1	0.01	0.09	0.01

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax cm	Mmax kN*m	IR	x fmax. cm	fmax	fmax / l	Nota
B	--	84	0.098	0.00	--	--	--	
--	Rara	51	0.003	--	45	0.00	1 / 99999	
--	Freq.	51	0.003	--	45	0.00	1 / 99999	
--	Q.Perm.	51	0.003	--	45	0.00	1 / 99999	
--	Rara	51	0.003	--	45	0.00	1 / 99999	
--	Freq.	51	0.003	--	45	0.00	1 / 99999	
--	Q.Perm.	51	0.003	--	45	0.00	1 / 99999	
--	Rara	51	0.003	--	45	0.00	1 / 99999	

**ASTA NUM. 1** NI 198 NF 30 Lungh. 83.8 cm SEZ. 10 Cc D= 0.080 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.05 0.05 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x cm	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
		kN			kN*m							
1A	0	-52.463	0.009	0.392	0.254	0.553	0.098	1	0.02	0.09	0.04	
1B	0	-52.463	0.295	0.392	0.254	0.553	-0.018	1	0.02	0.09	0.04	
1C	0	-52.463	0.009	-0.402	0.254	-0.547	0.098	1	0.02	0.09	0.04	
1D	0	-52.463	0.295	-0.402	0.254	-0.547	-0.018	1	0.02	0.09	0.04	
1E	0	-38.218	0.009	0.392	0.254	0.553	0.098	1	0.02	0.07	0.04	
1F	0	-38.218	0.295	0.392	0.254	0.553	-0.018	1	0.02	0.07	0.04	
1G	0	-38.218	0.009	-0.402	0.254	-0.547	0.098	1	0.02	0.07	0.04	
1H	0	-38.218	0.295	-0.402	0.254	-0.547	-0.018	1	0.02	0.07	0.04	
1I	0	-50.566	0.042	1.141	0.698	1.617	0.072	1	0.06	0.09	0.13	
1J	0	-50.566	0.262	1.141	0.698	1.617	0.008	1	0.06	0.09	0.13	
1K	0	-50.566	0.042	-1.150	0.698	-1.612	0.072	1	0.06	0.09	0.12	
1L	0	-50.566	0.262	-1.150	0.698	-1.612	0.008	1	0.06	0.09	0.12	
1M	0	-40.114	0.042	1.141	0.698	1.617	0.072	1	0.06	0.07	0.13	
1N	0	-40.114	0.262	1.141	0.698	1.617	0.008	1	0.06	0.07	0.13	
1O	0	-40.114	0.042	-1.150	0.698	-1.612	0.072	1	0.06	0.07	0.12	
1P	0	-40.114	0.262	-1.150	0.698	-1.612	0.008	1	0.06	0.07	0.12	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

2	0	-79.240	0.289	-0.010	0.035	0.005	-0.029	1	0.00	0.14	0.00
7	0	-68.410	0.059	-0.043	0.109	0.007	-0.135	1	0.01	0.12	0.01
1A	42	-52.393	-0.014	0.392	0.254	0.443	0.194	1	0.02	0.09	0.04
1B	42	-52.393	0.273	0.392	0.254	0.443	0.003	1	0.02	0.09	0.03
1C	42	-52.393	-0.014	-0.402	0.254	-0.433	0.194	1	0.02	0.09	0.04
1D	42	-52.393	0.273	-0.402	0.254	-0.433	0.003	1	0.02	0.09	0.03
1E	42	-38.148	-0.014	0.392	0.254	0.443	0.194	1	0.02	0.07	0.04
1F	42	-38.148	0.273	0.392	0.254	0.443	0.003	1	0.02	0.07	0.03
1G	42	-38.148	-0.014	-0.402	0.254	-0.433	0.194	1	0.02	0.07	0.04
1H	42	-38.148	0.273	-0.402	0.254	-0.433	0.003	1	0.02	0.07	0.03
1I	42	-50.496	0.020	1.141	0.698	1.200	0.166	1	0.06	0.09	0.09
1J	42	-50.496	0.240	1.141	0.698	1.200	0.031	1	0.06	0.09	0.09
1K	42	-50.496	0.020	-1.150	0.698	-1.190	0.166	1	0.06	0.09	0.09
1L	42	-50.496	0.240	-1.150	0.698	-1.190	0.031	1	0.06	0.09	0.09
1M	42	-40.044	0.020	1.141	0.698	1.200	0.166	1	0.06	0.07	0.09
1N	42	-40.044	0.240	1.141	0.698	1.200	0.031	1	0.06	0.07	0.09
1O	42	-40.044	0.020	-1.150	0.698	-1.190	0.166	1	0.06	0.07	0.09
1P	42	-40.044	0.240	-1.150	0.698	-1.190	0.031	1	0.06	0.07	0.09
2	42	-79.155	0.260	-0.010	0.035	0.009	0.086	1	0.00	0.14	0.01
7	42	-68.325	0.030	-0.043	0.109	0.024	-0.116	1	0.01	0.12	0.01
1A	84	-52.323	-0.036	0.392	0.254	0.333	0.281	1	0.02	0.09	0.03
1B	84	-52.323	0.250	0.392	0.254	0.333	0.016	1	0.02	0.09	0.03
1C	84	-52.323	-0.036	-0.402	0.254	-0.319	0.281	1	0.02	0.09	0.03
1D	84	-52.323	0.250	-0.402	0.254	-0.319	0.016	1	0.02	0.09	0.02
1E	84	-38.078	-0.036	0.392	0.254	0.333	0.281	1	0.02	0.07	0.03
1F	84	-38.078	0.250	0.392	0.254	0.333	0.016	1	0.02	0.07	0.03
1G	84	-38.078	-0.036	-0.402	0.254	-0.319	0.281	1	0.02	0.07	0.03
1H	84	-38.078	0.250	-0.402	0.254	-0.319	0.016	1	0.02	0.07	0.02
1I	84	-50.426	-0.003	1.141	0.698	0.783	0.252	1	0.06	0.09	0.06
1J	84	-50.426	0.217	1.141	0.698	0.783	0.045	1	0.06	0.09	0.06
1K	84	-50.426	-0.003	-1.150	0.698	-0.769	0.252	1	0.06	0.09	0.06
1L	84	-50.426	0.217	-1.150	0.698	-0.769	0.045	1	0.06	0.09	0.06
1M	84	-39.974	-0.003	1.141	0.698	0.783	0.252	1	0.06	0.07	0.06
1N	84	-39.974	0.217	1.141	0.698	0.783	0.045	1	0.06	0.07	0.06
1O	84	-39.974	-0.003	-1.150	0.698	-0.769	0.252	1	0.06	0.07	0.06
1P	84	-39.974	0.217	-1.150	0.698	-0.769	0.045	1	0.06	0.07	0.06
2	84	-79.070	0.231	-0.010	0.035	0.013	0.188	1	0.00	0.14	0.01
7	84	-68.240	0.001	-0.043	0.109	0.042	-0.110	1	0.01	0.12	0.01

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	IR	x	fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm	cm			
A	--	84	0.281	0.02	--	--	--	--	
--	Rara	16	0.000	--	52	-0.00	1 / 99999		
--	Freq.	16	0.000	--	52	-0.00	1 / 99999		
--	Q.Perm.	16	0.000	--	52	-0.00	1 / 99999		
--	Rara	16	0.000	--	52	-0.00	1 / 99999		
--	Freq.	16	0.000	--	52	-0.00	1 / 99999		
--	Q.Perm.	16	0.000	--	52	-0.00	1 / 99999		
--	Rara	16	0.000	--	52	-0.00	1 / 99999		

**ASTA NUM. 5** NI 30 NF 184 Lungh. 153.5 cm SEZ. 10 Cc D= 0.080 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.05 0.05 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-7.806	-1.293	0.406	0.093	0.421	0.676	1	0.01	0.01	0.06	
1B	0	-7.806	-0.358	0.406	0.093	0.421	0.239	1	0.01	0.01	0.04	
1C	0	-7.806	-1.293	-0.404	0.093	-0.418	0.676	1	0.01	0.01	0.06	
1D	0	-7.806	-0.358	-0.404	0.093	-0.418	0.239	1	0.01	0.01	0.04	
1E	0	-1.892	-1.293	0.406	0.093	0.421	0.676	1	0.01	0.00	0.06	
1F	0	-1.892	-0.358	0.406	0.093	0.421	0.239	1	0.01	0.00	0.04	
1G	0	-1.892	-1.293	-0.404	0.093	-0.418	0.676	1	0.01	0.00	0.06	
1H	0	-1.892	-0.358	-0.404	0.093	-0.418	0.239	1	0.01	0.00	0.04	
1I	0	-6.444	-1.067	1.005	0.219	1.111	0.570	1	0.02	0.01	0.10	
1J	0	-6.444	-0.585	1.005	0.219	1.111	0.344	1	0.02	0.01	0.09	
1K	0	-6.444	-1.067	-1.003	0.219	-1.108	0.570	1	0.02	0.01	0.10	
1L	0	-6.444	-0.585	-1.003	0.219	-1.108	0.344	1	0.02	0.01	0.09	
1M	0	-3.255	-1.067	1.005	0.219	1.111	0.570	1	0.02	0.01	0.10	
1N	0	-3.255	-0.585	1.005	0.219	1.111	0.344	1	0.02	0.01	0.09	
1O	0	-3.255	-1.067	-1.003	0.219	-1.108	0.570	1	0.02	0.01	0.10	
1P	0	-3.255	-0.585	-1.003	0.219	-1.108	0.344	1	0.02	0.01	0.09	
2	0	-17.140	-4.058	0.002	0.002	0.003	2.260	1	0.02	0.03	0.17	
7	0	-27.900	-6.972	0.003	0.007	0.008	3.839	1	0.03	0.05	0.30	
1A	77	-7.683	-1.334	0.406	0.093	0.076	-0.336	1	0.01	0.01	0.03	
1B	77	-7.683	-0.399	0.406	0.093	0.076	-0.049	1	0.01	0.01	0.01	
1C	77	-7.683	-1.334	-0.404	0.093	-0.074	-0.336	1	0.01	0.01	0.03	
1D	77	-7.683	-0.399	-0.404	0.093	-0.074	-0.049	1	0.01	0.01	0.01	
1E	77	-1.768	-1.334	0.406	0.093	0.076	-0.336	1	0.01	0.00	0.03	
1F	77	-1.768	-0.399	0.406	0.093	0.076	-0.049	1	0.01	0.00	0.01	
1G	77	-1.768	-1.334	-0.404	0.093	-0.074	-0.336	1	0.01	0.00	0.03	
1H	77	-1.768	-0.399	-0.404	0.093	-0.074	-0.049	1	0.01	0.00	0.01	
1I	77	-6.320	-1.107	1.005	0.219	0.293	-0.266	1	0.02	0.01	0.03	
1J	77	-6.320	-0.626	1.005	0.219	0.293	-0.119	1	0.02	0.01	0.02	
1K	77	-6.320	-1.107	-1.003	0.219	-0.291	-0.266	1	0.02	0.01	0.03	
1L	77	-6.320	-0.626	-1.003	0.219	-0.291	-0.119	1	0.02	0.01	0.02	
1M	77	-3.131	-1.107	1.005	0.219	0.293	-0.266	1	0.02	0.01	0.03	
1N	77	-3.131	-0.626	1.005	0.219	0.293	-0.119	1	0.02	0.01	0.02	
1O	77	-3.131	-1.107	-1.003	0.219	-0.291	-0.266	1	0.02	0.01	0.03	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1P	77	-3.131	-0.626	-1.003	0.219	-0.291	-0.119	1	0.02	0.01	0.02
2	77	-16.980	-4.111	0.002	0.002	0.002	-0.875	1	0.02	0.03	0.07
7	77	-27.740	-7.025	0.003	0.007	0.006	-1.534	1	0.03	0.05	0.12
1A	154	-7.559	-1.375	0.406	0.093	-0.270	-1.379	1	0.01	0.01	0.11
1B	154	-7.559	-0.440	0.406	0.093	-0.270	-0.368	1	0.01	0.01	0.04
1C	154	-7.559	-1.375	-0.404	0.093	0.270	-1.379	1	0.01	0.01	0.11
1D	154	-7.559	-0.440	-0.404	0.093	0.270	-0.368	1	0.01	0.01	0.04
1E	154	-1.645	-1.375	0.406	0.093	-0.270	-1.379	1	0.01	0.00	0.11
1F	154	-1.645	-0.440	0.406	0.093	-0.270	-0.368	1	0.01	0.00	0.04
1G	154	-1.645	-1.375	-0.404	0.093	0.270	-1.379	1	0.01	0.00	0.11
1H	154	-1.645	-0.440	-0.404	0.093	0.270	-0.368	1	0.01	0.00	0.04
1I	154	-6.197	-1.148	1.005	0.219	-0.526	-1.133	1	0.02	0.01	0.10
1J	154	-6.197	-0.667	1.005	0.219	-0.526	-0.614	1	0.02	0.01	0.06
1K	154	-6.197	-1.148	-1.003	0.219	0.526	-1.133	1	0.02	0.01	0.10
1L	154	-6.197	-0.667	-1.003	0.219	0.526	-0.614	1	0.02	0.01	0.06
1M	154	-3.008	-1.148	1.005	0.219	-0.526	-1.133	1	0.02	0.01	0.10
1N	154	-3.008	-0.667	1.005	0.219	-0.526	-0.614	1	0.02	0.01	0.06
1O	154	-3.008	-1.148	-1.003	0.219	0.526	-1.133	1	0.02	0.01	0.10
1P	154	-3.008	-0.667	-1.003	0.219	0.526	-0.614	1	0.02	0.01	0.06
2	154	-16.820	-4.164	0.002	0.002	-0.000	-4.051	1	0.02	0.03	0.31
7	154	-27.580	-7.078	0.003	0.007	0.004	-6.947	1	0.03	0.05	0.54

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm			
6	--	0	3.839	0.30	--	--	--	
--	Rara	91	0.010	--	83	0.00	1 / 99999	
--	Freq.	91	0.010	--	83	0.00	1 / 99999	
--	Q.Perm.	91	0.010	--	83	0.00	1 / 99999	
--	Rara	91	0.010	--	83	0.00	1 / 99999	
--	Freq.	91	0.010	--	83	0.00	1 / 99999	
--	Q.Perm.	91	0.010	--	83	0.00	1 / 99999	
--	Rara	91	0.010	--	83	0.00	1 / 99999	

### Verifica di Stabilita' NON eseguibile per sequenza di aste con sezioni diverse

ASTA NUM. 17 NI 26 NF 143 Lungh. 226.2 cm SEZ. 2 Cc D= 0.180 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.13 0.13 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-62.389	1.203	-0.762	0.482	-1.061	-0.693	1	0.01	0.04	0.02	
1B	0	-62.389	3.693	-0.762	0.482	-1.061	-3.827	1	0.01	0.04	0.05	
1C	0	-62.389	1.203	-2.724	0.482	-3.497	-0.693	1	0.01	0.04	0.05	
1D	0	-62.389	3.693	-2.724	0.482	-3.497	-3.827	1	0.01	0.04	0.07	
1E	0	-44.891	1.203	-0.762	0.482	-1.061	-0.693	1	0.01	0.03	0.02	
1F	0	-44.891	3.693	-0.762	0.482	-1.061	-3.827	1	0.01	0.03	0.05	
1G	0	-44.891	1.203	-2.724	0.482	-3.497	-0.693	1	0.01	0.03	0.05	
1H	0	-44.891	3.693	-2.724	0.482	-3.497	-3.827	1	0.01	0.03	0.07	
1I	0	-60.636	0.784	0.117	0.635	0.166	-0.291	1	0.01	0.04	0.00	
1J	0	-60.636	4.112	0.117	0.635	0.166	-4.229	1	0.01	0.04	0.06	
1K	0	-60.636	0.784	-3.603	0.635	-4.724	-0.291	1	0.01	0.04	0.06	
1L	0	-60.636	4.112	-3.603	0.635	-4.724	-4.229	1	0.01	0.04	0.08	
1M	0	-46.644	0.784	0.117	0.635	0.166	-0.291	1	0.01	0.03	0.00	
1N	0	-46.644	4.112	0.117	0.635	0.166	-4.229	1	0.01	0.03	0.06	
1O	0	-46.644	0.784	-3.603	0.635	-4.724	-0.291	1	0.01	0.03	0.06	
1P	0	-46.644	4.112	-3.603	0.635	-4.724	-4.229	1	0.01	0.03	0.08	
2	0	-108.100	6.474	-3.272	0.186	-4.241	-5.558	1	0.01	0.08	0.09	
7	0	-94.080	3.242	-3.269	0.758	-4.135	-2.324	1	0.01	0.07	0.06	
1A	113	-61.949	1.056	-0.762	0.482	-0.211	0.578	1	0.01	0.04	0.01	
1B	113	-61.949	3.546	-0.762	0.482	-0.211	0.274	1	0.01	0.04	0.00	
1C	113	-61.949	1.056	-2.724	0.482	-0.404	0.578	1	0.01	0.04	0.01	
1D	113	-61.949	3.546	-2.724	0.482	-0.404	0.274	1	0.01	0.04	0.01	
1E	113	-44.451	1.056	-0.762	0.482	-0.211	0.578	1	0.01	0.03	0.01	
1F	113	-44.451	3.546	-0.762	0.482	-0.211	0.274	1	0.01	0.03	0.00	
1G	113	-44.451	1.056	-2.724	0.482	-0.404	0.578	1	0.01	0.03	0.01	
1H	113	-44.451	3.546	-2.724	0.482	-0.404	0.274	1	0.01	0.03	0.01	
1I	113	-60.196	0.637	0.117	0.635	0.021	0.510	1	0.01	0.04	0.01	
1J	113	-60.196	3.965	0.117	0.635	0.021	0.342	1	0.01	0.04	0.00	
1K	113	-60.196	0.637	-3.603	0.635	-0.636	0.510	1	0.01	0.04	0.01	
1L	113	-60.196	3.965	-3.603	0.635	-0.636	0.342	1	0.01	0.04	0.01	
1M	113	-46.204	0.637	0.117	0.635	0.021	0.510	1	0.01	0.03	0.01	
1N	113	-46.204	3.965	0.117	0.635	0.021	0.342	1	0.01	0.03	0.00	
1O	113	-46.204	0.637	-3.603	0.635	-0.636	0.510	1	0.01	0.03	0.01	
1P	113	-46.204	3.965	-3.603	0.635	-0.636	0.342	1	0.01	0.03	0.01	
2	113	-107.550	6.283	-3.272	0.186	-0.540	1.657	1	0.01	0.08	0.02	
7	113	-93.505	3.051	-3.269	0.758	-0.438	1.235	1	0.01	0.07	0.02	
1A	226	-61.509	0.909	-0.762	0.482	0.638	1.683	1	0.01	0.04	0.02	
1B	226	-61.509	3.399	-0.762	0.482	0.638	4.209	1	0.01	0.04	0.06	
1C	226	-61.509	0.909	-2.724	0.482	2.690	1.683	1	0.01	0.04	0.04	
1D	226	-61.509	3.399	-2.724	0.482	2.690	4.209	1	0.01	0.04	0.07	
1E	226	-44.011	0.909	-0.762	0.482	0.638	1.683	1	0.01	0.03	0.02	
1F	226	-44.011	3.399	-0.762	0.482	0.638	4.209	1	0.01	0.03	0.06	
1G	226	-44.011	0.909	-2.724	0.482	2.690	1.683	1	0.01	0.03	0.04	
1H	226	-44.011	3.399	-2.724	0.482	2.690	4.209	1	0.01	0.03	0.07	
1I	226	-59.756	0.490	0.117	0.635	-0.123	1.145	1	0.01	0.04	0.02	
1J	226	-59.756	3.818	0.117	0.635	-0.123	4.747	1	0.01	0.04	0.06	
1K	226	-59.756	0.490	-3.603	0.635	3.451	1.145	1	0.01	0.04	0.05	
1L	226	-59.756	3.818	-3.603	0.635	3.451	4.747	1	0.01	0.04	0.08	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1M	226	-45.764	0.490	0.117	0.635	-0.123	1.145	1	0.01	0.03	0.02
1N	226	-45.764	3.818	0.117	0.635	-0.123	4.747	1	0.01	0.03	0.06
1O	226	-45.764	0.490	-3.603	0.635	3.451	1.145	1	0.01	0.03	0.05
1P	226	-45.764	3.818	-3.603	0.635	3.451	4.747	1	0.01	0.03	0.08
2	226	-107.000	6.092	-3.272	0.186	3.162	8.656	1	0.01	0.08	0.12
7	226	-92.930	2.859	-3.269	0.758	3.259	4.577	1	0.01	0.07	0.07

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm			
2	--	226	8.656	0.11	--	--	--	
--	Rara	84	0.046	--	97	0.00	1 / 99999	
--	Freq.	84	0.046	--	97	0.00	1 / 99999	
--	Q.Perm.	84	0.046	--	97	0.00	1 / 99999	
--	Rara	84	0.046	--	97	0.00	1 / 99999	
--	Freq.	84	0.046	--	97	0.00	1 / 99999	
--	Q.Perm.	84	0.046	--	97	0.00	1 / 99999	
--	Rara	84	0.046	--	97	0.00	1 / 99999	

**ASTA NUM. 2** NI 143 NF 27 Lungh. 269.3 cm SEZ. 2 Cc D= 0.180 s= 0.0100 m

categoria: p.p. y qy tot.  
qy medio: 0.13 0.13 kN/m

### Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Ex	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-55.455	-0.696	1.723	-0.658	2.725	0.739	1	0.01	0.04	0.04	
1B	0	-55.455	0.273	1.723	-0.658	2.725	-1.528	1	0.01	0.04	0.04	
1C	0	-55.455	-0.696	-0.090	-0.658	0.151	0.739	1	0.01	0.04	0.01	
1D	0	-55.455	0.273	-0.090	-0.658	0.151	-1.528	1	0.01	0.04	0.02	
1E	0	-38.885	-0.696	1.723	-0.658	2.725	0.739	1	0.01	0.03	0.04	
1F	0	-38.885	0.273	1.723	-0.658	2.725	-1.528	1	0.01	0.03	0.04	
1G	0	-38.885	-0.696	-0.090	-0.658	0.151	0.739	1	0.01	0.03	0.01	
1H	0	-38.885	0.273	-0.090	-0.658	0.151	-1.528	1	0.01	0.03	0.02	
1I	0	-54.796	-0.771	2.468	-1.044	3.427	0.749	1	0.02	0.04	0.05	
1J	0	-54.796	0.348	2.468	-1.044	3.427	-1.538	1	0.02	0.04	0.05	
1K	0	-54.796	-0.771	-0.835	-1.044	-0.551	0.749	1	0.02	0.04	0.01	
1L	0	-54.796	0.348	-0.835	-1.044	-0.551	-1.538	1	0.02	0.04	0.02	
1M	0	-39.544	-0.771	2.468	-1.044	3.427	0.749	1	0.02	0.03	0.05	
1N	0	-39.544	0.348	2.468	-1.044	3.427	-1.538	1	0.02	0.03	0.05	
1O	0	-39.544	-0.771	-0.835	-1.044	-0.551	0.749	1	0.02	0.03	0.01	
1P	0	-39.544	0.348	-0.835	-1.044	-0.551	-1.538	1	0.02	0.03	0.02	
2	0	-87.890	-0.744	1.538	-0.694	2.714	-1.832	1	0.01	0.06	0.04	
7	0	-81.370	0.194	3.841	-1.495	6.272	-2.477	1	0.02	0.06	0.09	
1A	135	-54.930	-0.871	1.723	-0.658	0.199	-0.372	1	0.01	0.04	0.01	
1B	135	-54.930	0.098	1.723	-0.658	0.199	-1.221	1	0.01	0.04	0.02	
1C	135	-54.930	-0.871	-0.090	-0.658	0.478	-0.372	1	0.01	0.04	0.01	
1D	135	-54.930	0.098	-0.090	-0.658	0.478	-1.221	1	0.01	0.04	0.02	
1E	135	-38.360	-0.871	1.723	-0.658	0.199	-0.372	1	0.01	0.03	0.01	
1F	135	-38.360	0.098	1.723	-0.658	0.199	-1.221	1	0.01	0.03	0.02	
1G	135	-38.360	-0.871	-0.090	-0.658	0.478	-0.372	1	0.01	0.03	0.01	
1H	135	-38.360	0.098	-0.090	-0.658	0.478	-1.221	1	0.01	0.03	0.02	
1I	135	-54.271	-0.946	2.468	-1.044	-0.551	-0.434	1	0.02	0.04	0.01	
1J	135	-54.271	0.173	2.468	-1.044	-0.551	-1.160	1	0.02	0.04	0.02	
1K	135	-54.271	-0.946	-0.835	-1.044	1.228	-0.434	1	0.02	0.04	0.02	
1L	135	-54.271	0.173	-0.835	-1.044	1.228	-1.160	1	0.02	0.04	0.02	
1M	135	-39.019	-0.946	2.468	-1.044	-0.551	-0.434	1	0.02	0.03	0.01	
1N	135	-39.019	0.173	2.468	-1.044	-0.551	-1.160	1	0.02	0.03	0.02	
1O	135	-39.019	-0.946	-0.835	-1.044	1.228	-0.434	1	0.02	0.03	0.02	
1P	135	-39.019	0.173	-0.835	-1.044	1.228	-1.160	1	0.02	0.03	0.02	
2	135	-87.210	-0.972	1.538	-0.694	0.643	-2.988	1	0.01	0.06	0.04	
7	135	-80.685	-0.034	3.841	-1.495	1.099	-2.370	1	0.02	0.06	0.03	
1A	269	-54.405	-1.046	1.723	-0.658	-2.327	-1.720	1	0.01	0.04	0.04	
1B	269	-54.405	-0.077	1.723	-0.658	-2.327	-1.150	1	0.01	0.04	0.03	
1C	269	-54.405	-1.046	-0.090	-0.658	0.806	-1.720	1	0.01	0.04	0.03	
1D	269	-54.405	-0.077	-0.090	-0.658	0.806	-1.150	1	0.01	0.04	0.02	
1E	269	-37.835	-1.046	1.723	-0.658	-2.327	-1.720	1	0.01	0.03	0.04	
1F	269	-37.835	-0.077	1.723	-0.658	-2.327	-1.150	1	0.01	0.03	0.03	
1G	269	-37.835	-1.046	-0.090	-0.658	0.806	-1.720	1	0.01	0.03	0.03	
1H	269	-37.835	-0.077	-0.090	-0.658	0.806	-1.150	1	0.01	0.03	0.02	
1I	269	-53.746	-1.121	2.468	-1.044	-4.529	-1.852	1	0.02	0.04	0.06	
1J	269	-53.746	-0.002	2.468	-1.044	-4.529	-1.018	1	0.02	0.04	0.06	
1K	269	-53.746	-1.121	-0.835	-1.044	3.008	-1.852	1	0.02	0.04	0.05	
1L	269	-53.746	-0.002	-0.835	-1.044	3.008	-1.018	1	0.02	0.04	0.04	
1M	269	-38.494	-1.121	2.468	-1.044	-4.529	-1.852	1	0.02	0.03	0.06	
1N	269	-38.494	-0.002	2.468	-1.044	-4.529	-1.018	1	0.02	0.03	0.06	
1O	269	-38.494	-1.121	-0.835	-1.044	3.008	-1.852	1	0.02	0.03	0.05	
1P	269	-38.494	-0.002	-0.835	-1.044	3.008	-1.018	1	0.02	0.03	0.04	
2	269	-86.530	-1.200	1.538	-0.694	-1.428	-4.450	1	0.01	0.06	0.06	
7	269	-80.000	-0.262	3.841	-1.495	-4.074	-2.569	1	0.02	0.06	0.06	

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm			
I	--	0	0.749	0.01	--	--	--	
--	Rara	142	0.045	--	140	0.00	1 / 99999	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

--	Freq.	142	0.045	--	140	0.00	1 / 99999
--	Q.Perm.	142	0.045	--	140	0.00	1 / 99999
--	Rara	142	0.045	--	140	0.00	1 / 99999
--	Freq.	142	0.045	--	140	0.00	1 / 99999
--	Q.Perm.	142	0.045	--	140	0.00	1 / 99999
--	Rara	142	0.045	--	140	0.00	1 / 99999

**ASTA NUM. 3** NI 27 NF 193 Lungh. 82.8 cm SEZ. 2 Cc D= 0.180 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.13 0.13 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-52.766	-0.138	0.490	-0.284	1.749	1.108	1	0.00	0.04	0.03	
1B	0	-52.766	0.254	0.490	-0.284	1.749	0.120	1	0.00	0.04	0.02	
1C	0	-52.766	-0.138	-0.500	-0.284	-1.797	1.108	1	0.00	0.04	0.03	
1D	0	-52.766	0.254	-0.500	-0.284	-1.797	0.120	1	0.00	0.04	0.02	
1E	0	-41.614	-0.138	0.490	-0.284	1.749	1.108	1	0.00	0.03	0.03	
1F	0	-41.614	0.254	0.490	-0.284	1.749	0.120	1	0.00	0.03	0.02	
1G	0	-41.614	-0.138	-0.500	-0.284	-1.797	1.108	1	0.00	0.03	0.03	
1H	0	-41.614	0.254	-0.500	-0.284	-1.797	0.120	1	0.00	0.03	0.02	
1I	0	-49.944	-0.044	1.087	-0.849	5.008	0.882	1	0.01	0.04	0.07	
1J	0	-49.944	0.160	1.087	-0.849	5.008	0.345	1	0.01	0.04	0.07	
1K	0	-49.944	-0.044	-1.097	-0.849	-5.057	0.882	1	0.01	0.04	0.07	
1L	0	-49.944	0.160	-1.097	-0.849	-5.057	0.345	1	0.01	0.04	0.07	
1M	0	-44.436	-0.044	1.087	-0.849	5.008	0.882	1	0.01	0.03	0.07	
1N	0	-44.436	0.160	1.087	-0.849	5.008	0.345	1	0.01	0.03	0.07	
1O	0	-44.436	-0.044	-1.097	-0.849	-5.057	0.882	1	0.01	0.03	0.07	
1P	0	-44.436	0.160	-1.097	-0.849	-5.057	0.345	1	0.01	0.03	0.07	
2	0	-79.930	-0.589	-0.010	-0.002	-0.048	2.978	1	0.00	0.06	0.04	
7	0	-67.610	-0.962	-0.043	0.021	-0.201	3.901	1	0.00	0.05	0.05	
1A	41	-52.606	-0.192	0.490	-0.284	1.595	1.047	1	0.00	0.04	0.03	
1B	41	-52.606	0.200	0.490	-0.284	1.595	0.206	1	0.00	0.04	0.02	
1C	41	-52.606	-0.192	-0.500	-0.284	-1.640	1.047	1	0.00	0.04	0.03	
1D	41	-52.606	0.200	-0.500	-0.284	-1.640	0.206	1	0.00	0.04	0.02	
1E	41	-41.454	-0.192	0.490	-0.284	1.595	1.047	1	0.00	0.03	0.03	
1F	41	-41.454	0.200	0.490	-0.284	1.595	0.206	1	0.00	0.03	0.02	
1G	41	-41.454	-0.192	-0.500	-0.284	-1.640	1.047	1	0.00	0.03	0.03	
1H	41	-41.454	0.200	-0.500	-0.284	-1.640	0.206	1	0.00	0.03	0.02	
1I	41	-49.784	-0.098	1.087	-0.849	4.589	0.858	1	0.01	0.04	0.06	
1J	41	-49.784	0.106	1.087	-0.849	4.589	0.395	1	0.01	0.04	0.06	
1K	41	-49.784	-0.098	-1.097	-0.849	-4.634	0.858	1	0.01	0.04	0.06	
1L	41	-49.784	0.106	-1.097	-0.849	-4.634	0.395	1	0.01	0.04	0.06	
1M	41	-44.276	-0.098	1.087	-0.849	4.589	0.858	1	0.01	0.03	0.06	
1N	41	-44.276	0.106	1.087	-0.849	4.589	0.395	1	0.01	0.03	0.06	
1O	41	-44.276	-0.098	-1.097	-0.849	-4.634	0.858	1	0.01	0.03	0.06	
1P	41	-44.276	0.106	-1.097	-0.849	-4.634	0.395	1	0.01	0.03	0.06	
2	41	-79.720	-0.658	-0.010	-0.002	-0.044	2.720	1	0.00	0.06	0.04	
7	41	-67.400	-1.032	-0.043	0.021	-0.184	3.488	1	0.00	0.05	0.05	
1A	83	-52.446	-0.246	0.490	-0.284	1.442	0.964	1	0.00	0.04	0.02	
1B	83	-52.446	0.146	0.490	-0.284	1.442	0.270	1	0.00	0.04	0.02	
1C	83	-52.446	-0.246	-0.500	-0.284	-1.483	0.964	1	0.00	0.04	0.02	
1D	83	-52.446	0.146	-0.500	-0.284	-1.483	0.270	1	0.00	0.04	0.02	
1E	83	-41.294	-0.246	0.490	-0.284	1.442	0.964	1	0.00	0.03	0.02	
1F	83	-41.294	0.146	0.490	-0.284	1.442	0.270	1	0.00	0.03	0.02	
1G	83	-41.294	-0.246	-0.500	-0.284	-1.483	0.964	1	0.00	0.03	0.02	
1H	83	-41.294	0.146	-0.500	-0.284	-1.483	0.270	1	0.00	0.03	0.02	
1I	83	-49.624	-0.152	1.087	-0.849	4.169	0.811	1	0.01	0.04	0.06	
1J	83	-49.624	0.052	1.087	-0.849	4.169	0.423	1	0.01	0.04	0.06	
1K	83	-49.624	-0.152	-1.097	-0.849	-4.210	0.811	1	0.01	0.04	0.06	
1L	83	-49.624	0.052	-1.097	-0.849	-4.210	0.423	1	0.01	0.04	0.06	
1M	83	-44.116	-0.152	1.087	-0.849	4.169	0.811	1	0.01	0.03	0.06	
1N	83	-44.116	0.052	1.087	-0.849	4.169	0.423	1	0.01	0.03	0.06	
1O	83	-44.116	-0.152	-1.097	-0.849	-4.210	0.811	1	0.01	0.03	0.06	
1P	83	-44.116	0.052	-1.097	-0.849	-4.210	0.423	1	0.01	0.03	0.06	
2	83	-79.510	-0.728	-0.010	-0.002	-0.040	2.433	1	0.00	0.06	0.03	
7	83	-67.190	-1.102	-0.043	0.021	-0.166	3.047	1	0.00	0.05	0.04	

MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	IR	x fmax.	fmax	fmax / l	Nota
--	--	--	--	--	--	--	--	--
		cm	kN*m		cm			
6	--	0	3.901	0.05	--	--	--	
--	Rara	83	0.004	--	35	-0.00	1 / 99999	
--	Freq.	83	0.004	--	35	-0.00	1 / 99999	
--	Q.Perm.	83	0.004	--	35	-0.00	1 / 99999	
--	Rara	83	0.004	--	35	-0.00	1 / 99999	
--	Freq.	83	0.004	--	35	-0.00	1 / 99999	
--	Q.Perm.	83	0.004	--	35	-0.00	1 / 99999	
--	Rara	83	0.004	--	35	-0.00	1 / 99999	

**ASTA NUM. 11** NI 193 NF 192 Lungh. 82.8 cm SEZ. 6 Cc D= 0.160 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.11 0.11 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1A	0	-52.437	-0.222	0.431	-0.284	1.442	0.964	1	0.01	0.04	0.03
1B	0	-52.437	0.123	0.431	-0.284	1.442	0.270	1	0.01	0.04	0.02
1C	0	-52.437	-0.222	-0.441	-0.284	-1.483	0.964	1	0.01	0.04	0.03
1D	0	-52.437	0.123	-0.441	-0.284	-1.483	0.270	1	0.01	0.04	0.03
1E	0	-41.303	-0.222	0.431	-0.284	1.442	0.964	1	0.01	0.03	0.03
1F	0	-41.303	0.123	0.431	-0.284	1.442	0.270	1	0.01	0.03	0.02
1G	0	-41.303	-0.222	-0.441	-0.284	-1.483	0.964	1	0.01	0.03	0.03
1H	0	-41.303	0.123	-0.441	-0.284	-1.483	0.270	1	0.01	0.03	0.03
1I	0	-49.619	-0.142	1.056	-0.849	4.169	0.811	1	0.02	0.04	0.07
1J	0	-49.619	0.042	1.056	-0.849	4.169	0.423	1	0.02	0.04	0.07
1K	0	-49.619	-0.142	-1.066	-0.849	-4.210	0.811	1	0.02	0.04	0.07
1L	0	-49.619	0.042	-1.066	-0.849	-4.210	0.423	1	0.02	0.04	0.07
1M	0	-44.121	-0.142	1.056	-0.849	4.169	0.811	1	0.02	0.04	0.07
1N	0	-44.121	0.042	1.056	-0.849	4.169	0.423	1	0.02	0.04	0.07
1O	0	-44.121	-0.142	-1.066	-0.849	-4.210	0.811	1	0.02	0.04	0.07
1P	0	-44.121	0.042	-1.066	-0.849	-4.210	0.423	1	0.02	0.04	0.07
2	0	-79.510	-0.728	-0.010	-0.002	-0.040	2.433	1	0.00	0.06	0.04
7	0	-67.190	-1.102	-0.043	0.021	-0.166	3.047	1	0.00	0.05	0.05
1A	41	-52.297	-0.270	0.431	-0.284	1.314	0.873	1	0.01	0.04	0.03
1B	41	-52.297	0.075	0.431	-0.284	1.314	0.301	1	0.01	0.04	0.02
1C	41	-52.297	-0.270	-0.441	-0.284	-1.351	0.873	1	0.01	0.04	0.03
1D	41	-52.297	0.075	-0.441	-0.284	-1.351	0.301	1	0.01	0.04	0.02
1E	41	-41.163	-0.270	0.431	-0.284	1.314	0.873	1	0.01	0.03	0.03
1F	41	-41.163	0.075	0.431	-0.284	1.314	0.301	1	0.01	0.03	0.02
1G	41	-41.163	-0.270	-0.441	-0.284	-1.351	0.873	1	0.01	0.03	0.03
1H	41	-41.163	0.075	-0.441	-0.284	-1.351	0.301	1	0.01	0.03	0.02
1I	41	-49.479	-0.189	1.056	-0.849	3.766	0.748	1	0.02	0.04	0.07
1J	41	-49.479	-0.005	1.056	-0.849	3.766	0.425	1	0.02	0.04	0.06
1K	41	-49.479	-0.189	-1.066	-0.849	-3.803	0.748	1	0.02	0.04	0.07
1L	41	-49.479	-0.005	-1.066	-0.849	-3.803	0.425	1	0.02	0.04	0.06
1M	41	-43.981	-0.189	1.056	-0.849	3.766	0.748	1	0.02	0.04	0.07
1N	41	-43.981	-0.005	1.056	-0.849	3.766	0.425	1	0.02	0.04	0.06
1O	41	-43.981	-0.189	-1.066	-0.849	-3.803	0.748	1	0.02	0.04	0.07
1P	41	-43.981	-0.005	-1.066	-0.849	-3.803	0.425	1	0.02	0.04	0.06
2	41	-79.325	-0.790	-0.010	-0.002	-0.036	2.119	1	0.00	0.06	0.04
7	41	-67.005	-1.164	-0.043	0.021	-0.148	2.578	1	0.00	0.05	0.04
1A	83	-52.157	-0.318	0.431	-0.284	1.187	0.761	1	0.01	0.04	0.02
1B	83	-52.157	0.028	0.431	-0.284	1.187	0.312	1	0.01	0.04	0.02
1C	83	-52.157	-0.318	-0.441	-0.284	-1.219	0.761	1	0.01	0.04	0.02
1D	83	-52.157	0.028	-0.441	-0.284	-1.219	0.312	1	0.01	0.04	0.02
1E	83	-41.023	-0.318	0.431	-0.284	1.187	0.761	1	0.01	0.03	0.02
1F	83	-41.023	0.028	0.431	-0.284	1.187	0.312	1	0.01	0.03	0.02
1G	83	-41.023	-0.318	-0.441	-0.284	-1.219	0.761	1	0.01	0.03	0.02
1H	83	-41.023	0.028	-0.441	-0.284	-1.219	0.312	1	0.01	0.03	0.02
1I	83	-49.339	-0.237	1.056	-0.849	3.363	0.665	1	0.02	0.04	0.06
1J	83	-49.339	-0.053	1.056	-0.849	3.363	0.408	1	0.02	0.04	0.06
1K	83	-49.339	-0.237	-1.066	-0.849	-3.396	0.665	1	0.02	0.04	0.06
1L	83	-49.339	-0.053	-1.066	-0.849	-3.396	0.408	1	0.02	0.04	0.06
1M	83	-43.841	-0.237	1.056	-0.849	3.363	0.665	1	0.02	0.04	0.06
1N	83	-43.841	-0.053	1.056	-0.849	3.363	0.408	1	0.02	0.04	0.06
1O	83	-43.841	-0.237	-1.066	-0.849	-3.396	0.665	1	0.02	0.04	0.06
1P	83	-43.841	-0.053	-1.066	-0.849	-3.396	0.408	1	0.02	0.04	0.06
2	83	-79.140	-0.852	-0.010	-0.002	-0.032	1.779	1	0.00	0.06	0.03
7	83	-66.820	-1.225	-0.043	0.021	-0.131	2.083	1	0.00	0.05	0.04

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm			
6	--	0	3.047	0.05	--	--	--	
--	Rara	28	0.009	--	38	0.00	1 / 99999	
--	Freq.	28	0.009	--	38	0.00	1 / 99999	
--	Q.Perm.	28	0.009	--	38	0.00	1 / 99999	
--	Rara	28	0.009	--	38	0.00	1 / 99999	
--	Freq.	28	0.009	--	38	0.00	1 / 99999	
--	Q.Perm.	28	0.009	--	38	0.00	1 / 99999	
--	Rara	28	0.009	--	38	0.00	1 / 99999	

**ASTA NUM. 10** NI 192 NF 191 Lungh. 82.8 cm SEZ. 7 Cc D= 0.140 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.10 0.10 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-52.149	-0.289	0.382	-0.284	1.187	0.761	1	0.01	0.05	0.03	
1B	0	-52.149	0.000	0.382	-0.284	1.187	0.312	1	0.01	0.05	0.03	
1C	0	-52.149	-0.289	-0.392	-0.284	-1.219	0.761	1	0.01	0.05	0.03	
1D	0	-52.149	0.000	-0.392	-0.284	-1.219	0.312	1	0.01	0.05	0.03	
1E	0	-41.032	-0.289	0.382	-0.284	1.187	0.761	1	0.01	0.04	0.03	
1F	0	-41.032	0.000	0.382	-0.284	1.187	0.312	1	0.01	0.04	0.03	
1G	0	-41.032	-0.289	-0.392	-0.284	-1.219	0.761	1	0.01	0.04	0.03	
1H	0	-41.032	0.000	-0.392	-0.284	-1.219	0.312	1	0.01	0.04	0.03	
1I	0	-49.336	-0.223	1.028	-0.849	3.363	0.665	1	0.02	0.05	0.08	
1J	0	-49.336	-0.066	1.028	-0.849	3.363	0.408	1	0.02	0.05	0.08	
1K	0	-49.336	-0.223	-1.037	-0.849	-3.396	0.665	1	0.02	0.05	0.08	
1L	0	-49.336	-0.066	-1.037	-0.849	-3.396	0.408	1	0.02	0.05	0.08	
1M	0	-43.844	-0.223	1.028	-0.849	3.363	0.665	1	0.02	0.04	0.08	
1N	0	-43.844	-0.066	1.028	-0.849	3.363	0.408	1	0.02	0.04	0.08	
1O	0	-43.844	-0.223	-1.037	-0.849	-3.396	0.665	1	0.02	0.04	0.08	
1P	0	-43.844	-0.066	-1.037	-0.849	-3.396	0.408	1	0.02	0.04	0.08	
2	0	-79.140	-0.851	-0.010	-0.002	-0.032	1.779	1	0.00	0.07	0.04	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

7	0	-66.820	-1.225	-0.043	0.021	-0.131	2.083	1	0.00	0.06	0.05
1A	41	-52.024	-0.330	0.382	-0.284	1.061	0.647	1	0.01	0.05	0.03
1B	41	-52.024	-0.041	0.382	-0.284	1.061	0.289	1	0.01	0.05	0.02
1C	41	-52.024	-0.330	-0.392	-0.284	-1.089	0.647	1	0.01	0.05	0.03
1D	41	-52.024	-0.041	-0.392	-0.284	-1.089	0.289	1	0.01	0.05	0.03
1E	41	-40.907	-0.330	0.382	-0.284	1.061	0.647	1	0.01	0.04	0.03
1F	41	-40.907	-0.041	0.382	-0.284	1.061	0.289	1	0.01	0.04	0.02
1G	41	-40.907	-0.330	-0.392	-0.284	-1.089	0.647	1	0.01	0.04	0.03
1H	41	-40.907	-0.041	-0.392	-0.284	-1.089	0.289	1	0.01	0.04	0.03
1I	41	-49.211	-0.264	1.028	-0.849	2.974	0.571	1	0.02	0.05	0.07
1J	41	-49.211	-0.107	1.028	-0.849	2.974	0.365	1	0.02	0.05	0.07
1K	41	-49.211	-0.264	-1.037	-0.849	-3.002	0.571	1	0.02	0.05	0.07
1L	41	-49.211	-0.107	-1.037	-0.849	-3.002	0.365	1	0.02	0.05	0.07
1M	41	-43.719	-0.264	1.028	-0.849	2.974	0.571	1	0.02	0.04	0.07
1N	41	-43.719	-0.107	1.028	-0.849	2.974	0.365	1	0.02	0.04	0.07
1O	41	-43.719	-0.264	-1.037	-0.849	-3.002	0.571	1	0.02	0.04	0.07
1P	41	-43.719	-0.107	-1.037	-0.849	-3.002	0.365	1	0.02	0.04	0.07
2	41	-78.980	-0.905	-0.010	-0.002	-0.028	1.416	1	0.00	0.07	0.03
7	41	-66.655	-1.279	-0.043	0.021	-0.113	1.565	1	0.00	0.06	0.04
1A	83	-51.899	-0.372	0.382	-0.284	0.935	0.516	1	0.01	0.05	0.02
1B	83	-51.899	-0.082	0.382	-0.284	0.935	0.250	1	0.01	0.05	0.02
1C	83	-51.899	-0.372	-0.392	-0.284	-0.959	0.516	1	0.01	0.05	0.02
1D	83	-51.899	-0.082	-0.392	-0.284	-0.959	0.250	1	0.01	0.05	0.02
1E	83	-40.782	-0.372	0.382	-0.284	0.935	0.516	1	0.01	0.04	0.02
1F	83	-40.782	-0.082	0.382	-0.284	0.935	0.250	1	0.01	0.04	0.02
1G	83	-40.782	-0.372	-0.392	-0.284	-0.959	0.516	1	0.01	0.04	0.02
1H	83	-40.782	-0.082	-0.392	-0.284	-0.959	0.250	1	0.01	0.04	0.02
1I	83	-49.086	-0.305	1.028	-0.849	2.584	0.460	1	0.02	0.05	0.06
1J	83	-49.086	-0.149	1.028	-0.849	2.584	0.306	1	0.02	0.05	0.06
1K	83	-49.086	-0.305	-1.037	-0.849	-2.609	0.460	1	0.02	0.05	0.06
1L	83	-49.086	-0.149	-1.037	-0.849	-2.609	0.306	1	0.02	0.05	0.06
1M	83	-43.594	-0.305	1.028	-0.849	2.584	0.460	1	0.02	0.04	0.06
1N	83	-43.594	-0.149	1.028	-0.849	2.584	0.306	1	0.02	0.04	0.06
1O	83	-43.594	-0.305	-1.037	-0.849	-2.609	0.460	1	0.02	0.04	0.06
1P	83	-43.594	-0.149	-1.037	-0.849	-2.609	0.306	1	0.02	0.04	0.06
2	83	-78.820	-0.958	-0.010	-0.002	-0.024	1.030	1	0.00	0.07	0.02
7	83	-66.490	-1.332	-0.043	0.021	-0.095	1.025	1	0.00	0.06	0.02

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m			cm		
6	--	0	2.083	0.05	--	--	--	
--	Rara	46	0.002	--	46	0.00	1 / 99999	
--	Freq.	46	0.002	--	46	0.00	1 / 99999	
--	Q.Perm.	46	0.002	--	46	0.00	1 / 99999	
--	Rara	46	0.002	--	46	0.00	1 / 99999	
--	Freq.	46	0.002	--	46	0.00	1 / 99999	
--	Q.Perm.	46	0.002	--	46	0.00	1 / 99999	
--	Rara	46	0.002	--	46	0.00	1 / 99999	

**ASTA NUM. 9** NI 191 NF 190 Lungh. 82.8 cm SEZ. 8 Cc D= 0.120 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-51.891	-0.341	0.382	-0.284	0.935	0.516	1	0.01	0.06	0.03	
1B	0	-51.891	-0.148	0.382	-0.284	0.935	0.250	1	0.01	0.06	0.03	
1C	0	-51.891	-0.341	-0.391	-0.284	-0.959	0.516	1	0.01	0.06	0.03	
1D	0	-51.891	-0.113	-0.391	-0.284	-0.959	0.250	1	0.01	0.06	0.03	
1E	0	-40.789	-0.341	0.382	-0.284	0.935	0.516	1	0.01	0.05	0.03	
1F	0	-40.789	-0.113	0.382	-0.284	0.935	0.250	1	0.01	0.05	0.03	
1G	0	-40.789	-0.341	-0.391	-0.284	-0.959	0.516	1	0.01	0.05	0.03	
1H	0	-40.789	-0.113	-0.391	-0.284	-0.959	0.250	1	0.01	0.05	0.03	
1I	0	-49.083	-0.289	1.013	-0.849	2.584	0.460	1	0.03	0.05	0.08	
1J	0	-49.083	-0.165	1.013	-0.849	2.584	0.306	1	0.03	0.05	0.08	
1K	0	-49.083	-0.289	-1.023	-0.849	-2.609	0.460	1	0.03	0.05	0.08	
1L	0	-49.083	-0.165	-1.023	-0.849	-2.609	0.306	1	0.03	0.05	0.08	
1M	0	-43.597	-0.289	1.013	-0.849	2.584	0.460	1	0.03	0.05	0.08	
1N	0	-43.597	-0.165	1.013	-0.849	2.584	0.306	1	0.03	0.05	0.08	
1O	0	-43.597	-0.289	-1.023	-0.849	-2.609	0.460	1	0.03	0.05	0.08	
1P	0	-43.597	-0.165	-1.023	-0.849	-2.609	0.306	1	0.03	0.05	0.08	
2	0	-78.820	-0.959	-0.010	-0.002	-0.024	1.030	1	0.00	0.09	0.03	
7	0	-66.490	-1.332	-0.043	0.021	-0.095	1.025	1	0.00	0.07	0.03	
1A	41	-51.786	-0.376	0.382	-0.284	0.801	0.389	1	0.01	0.06	0.03	
1B	41	-51.786	-0.148	0.382	-0.284	0.801	0.174	1	0.01	0.06	0.03	
1C	41	-51.786	-0.376	-0.391	-0.284	-0.822	0.389	1	0.01	0.06	0.03	
1D	41	-51.786	-0.148	-0.391	-0.284	-0.822	0.174	1	0.01	0.06	0.03	
1E	41	-40.684	-0.376	0.382	-0.284	0.801	0.389	1	0.01	0.04	0.03	
1F	41	-40.684	-0.148	0.382	-0.284	0.801	0.174	1	0.01	0.04	0.03	
1G	41	-40.684	-0.376	-0.391	-0.284	-0.822	0.389	1	0.01	0.04	0.03	
1H	41	-40.684	-0.148	-0.391	-0.284	-0.822	0.174	1	0.01	0.04	0.03	
1I	41	-48.978	-0.324	1.013	-0.849	2.218	0.342	1	0.03	0.05	0.07	
1J	41	-48.978	-0.200	1.013	-0.849	2.218	0.222	1	0.03	0.05	0.07	
1K	41	-48.978	-0.324	-1.023	-0.849	-2.239	0.342	1	0.03	0.05	0.07	
1L	41	-48.978	-0.200	-1.023	-0.849	-2.239	0.222	1	0.03	0.05	0.07	
1M	41	-43.492	-0.324	1.013	-0.849	2.218	0.342	1	0.03	0.05	0.07	
1N	41	-43.492	-0.200	1.013	-0.849	2.218	0.222	1	0.03	0.05	0.07	
1O	41	-43.492	-0.324	-1.023	-0.849	-2.239	0.342	1	0.03	0.05	0.07	
1P	41	-43.492	-0.200	-1.023	-0.849	-2.239	0.222	1	0.03	0.05	0.07	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

2	41	-78.685	-1.004	-0.010	-0.002	-0.020	0.624	1	0.00	0.09	0.02
7	41	-66.355	-1.378	-0.043	0.021	-0.078	0.464	1	0.00	0.07	0.01
1A	83	-51.681	-0.411	0.382	-0.284	0.668	0.249	1	0.01	0.06	0.02
1B	83	-51.681	-0.182	0.382	-0.284	0.668	0.083	1	0.01	0.06	0.02
1C	83	-51.681	-0.411	-0.391	-0.284	-0.684	0.249	1	0.01	0.06	0.02
1D	83	-51.681	-0.182	-0.391	-0.284	-0.684	0.083	1	0.01	0.06	0.02
1E	83	-40.579	-0.411	0.382	-0.284	0.668	0.249	1	0.01	0.04	0.02
1F	83	-40.579	-0.182	0.382	-0.284	0.668	0.083	1	0.01	0.04	0.02
1G	83	-40.579	-0.411	-0.391	-0.284	-0.684	0.249	1	0.01	0.04	0.02
1H	83	-40.579	-0.182	-0.391	-0.284	-0.684	0.083	1	0.01	0.04	0.02
1I	83	-48.873	-0.359	1.013	-0.849	1.852	0.209	1	0.03	0.05	0.06
1J	83	-48.873	-0.235	1.013	-0.849	1.852	0.123	1	0.03	0.05	0.06
1K	83	-48.873	-0.359	-1.023	-0.849	-1.868	0.209	1	0.03	0.05	0.06
1L	83	-48.873	-0.235	-1.023	-0.849	-1.868	0.123	1	0.03	0.05	0.06
1M	83	-43.387	-0.359	1.013	-0.849	1.852	0.209	1	0.03	0.05	0.06
1N	83	-43.387	-0.235	1.013	-0.849	1.852	0.123	1	0.03	0.05	0.06
1O	83	-43.387	-0.359	-1.023	-0.849	-1.868	0.209	1	0.03	0.05	0.06
1P	83	-43.387	-0.235	-1.023	-0.849	-1.868	0.123	1	0.03	0.05	0.06
2	83	-78.550	-1.049	-0.010	-0.002	-0.016	0.199	1	0.00	0.09	0.01
7	83	-66.220	-1.423	-0.043	0.021	-0.060	-0.116	1	0.00	0.07	0.00

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax cm	Mmax kN*m	IR	x fmax. cm	fmax	fmax / l	Nota
2	--	0	1.030	0.03	--	--	--	
--	Rara	42	0.003	--	42	0.00	1 / 99999	
--	Freq.	42	0.003	--	42	0.00	1 / 99999	
--	Q.Perm.	42	0.003	--	42	0.00	1 / 99999	
--	Rara	42	0.003	--	42	0.00	1 / 99999	
--	Freq.	42	0.003	--	42	0.00	1 / 99999	
--	Q.Perm.	42	0.003	--	42	0.00	1 / 99999	
--	Rara	42	0.003	--	42	0.00	1 / 99999	

**ASTA NUM. 8** NI 190 NF 189 Lungh. 82.8 cm SEZ. 9 Cc D= 0.100 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.07 0.07 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x cm	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
		kN			kN*m							
1A	0	-51.674	-0.386	0.410	-0.284	0.668	0.249	1	0.01	0.07	0.03	
1B	0	-51.674	-0.207	0.410	-0.284	0.668	0.083	1	0.01	0.07	0.03	
1C	0	-51.674	-0.386	-0.420	-0.284	-0.684	0.249	1	0.01	0.07	0.03	
1D	0	-51.674	-0.207	-0.420	-0.284	-0.684	0.083	1	0.01	0.07	0.03	
1E	0	-40.586	-0.386	0.410	-0.284	0.668	0.249	1	0.01	0.05	0.03	
1F	0	-40.586	-0.207	0.410	-0.284	0.668	0.083	1	0.01	0.05	0.03	
1G	0	-40.586	-0.386	-0.420	-0.284	-0.684	0.249	1	0.01	0.05	0.03	
1H	0	-40.586	-0.207	-0.420	-0.284	-0.684	0.083	1	0.01	0.05	0.03	
1I	0	-48.870	-0.345	1.006	-0.849	1.852	0.209	1	0.04	0.07	0.09	
1J	0	-48.870	-0.248	1.006	-0.849	1.852	0.123	1	0.04	0.07	0.09	
1K	0	-48.870	-0.345	-1.016	-0.849	-1.868	0.209	1	0.04	0.07	0.09	
1L	0	-48.870	-0.248	-1.016	-0.849	-1.868	0.123	1	0.04	0.07	0.09	
1M	0	-43.390	-0.345	1.006	-0.849	1.852	0.209	1	0.04	0.06	0.09	
1N	0	-43.390	-0.248	1.006	-0.849	1.852	0.123	1	0.04	0.06	0.09	
1O	0	-43.390	-0.345	-1.016	-0.849	-1.868	0.209	1	0.04	0.06	0.09	
1P	0	-43.390	-0.248	-1.016	-0.849	-1.868	0.123	1	0.04	0.06	0.09	
2	0	-78.550	-1.049	-0.010	-0.002	-0.016	0.199	1	0.00	0.11	0.01	
7	0	-66.220	-1.423	-0.043	0.021	-0.060	-0.116	1	0.01	0.09	0.01	
1A	41	-51.589	-0.415	0.410	-0.284	0.551	0.119	1	0.01	0.07	0.03	
1B	41	-51.589	-0.236	0.410	-0.284	0.551	-0.045	1	0.01	0.07	0.03	
1C	41	-51.589	-0.415	-0.420	-0.284	-0.564	0.119	1	0.01	0.07	0.03	
1D	41	-51.589	-0.236	-0.420	-0.284	-0.564	-0.045	1	0.01	0.07	0.03	
1E	41	-40.501	-0.415	0.410	-0.284	0.551	0.119	1	0.01	0.05	0.03	
1F	41	-40.501	-0.236	0.410	-0.284	0.551	-0.045	1	0.01	0.05	0.03	
1G	41	-40.501	-0.415	-0.420	-0.284	-0.564	0.119	1	0.01	0.05	0.03	
1H	41	-40.501	-0.236	-0.420	-0.284	-0.564	-0.045	1	0.01	0.05	0.03	
1I	41	-48.785	-0.374	1.006	-0.849	1.553	0.075	1	0.04	0.07	0.07	
1J	41	-48.785	-0.276	1.006	-0.849	1.553	-0.001	1	0.04	0.07	0.07	
1K	41	-48.785	-0.374	-1.016	-0.849	-1.565	0.075	1	0.04	0.07	0.07	
1L	41	-48.785	-0.276	-1.016	-0.849	-1.565	-0.001	1	0.04	0.07	0.07	
1M	41	-43.305	-0.374	1.006	-0.849	1.553	0.075	1	0.04	0.06	0.07	
1N	41	-43.305	-0.276	1.006	-0.849	1.553	-0.001	1	0.04	0.06	0.07	
1O	41	-43.305	-0.374	-1.016	-0.849	-1.565	0.075	1	0.04	0.06	0.07	
1P	41	-43.305	-0.276	-1.016	-0.849	-1.565	-0.001	1	0.04	0.06	0.07	
2	41	-78.440	-1.086	-0.010	-0.002	-0.012	-0.243	1	0.00	0.11	0.01	
7	41	-66.110	-1.460	-0.043	0.021	-0.043	-0.712	1	0.01	0.09	0.03	
1A	83	-51.504	-0.443	0.410	-0.284	0.435	-0.022	1	0.01	0.07	0.02	
1B	83	-51.504	-0.264	0.410	-0.284	0.435	-0.184	1	0.01	0.07	0.02	
1C	83	-51.504	-0.443	-0.420	-0.284	-0.443	-0.022	1	0.01	0.07	0.02	
1D	83	-51.504	-0.264	-0.420	-0.284	-0.443	-0.184	1	0.01	0.07	0.02	
1E	83	-40.416	-0.443	0.410	-0.284	0.435	-0.022	1	0.01	0.05	0.02	
1F	83	-40.416	-0.264	0.410	-0.284	0.435	-0.184	1	0.01	0.05	0.02	
1G	83	-40.416	-0.443	-0.420	-0.284	-0.443	-0.022	1	0.01	0.05	0.02	
1H	83	-40.416	-0.264	-0.420	-0.284	-0.443	-0.184	1	0.01	0.05	0.02	
1I	83	-48.700	-0.402	1.006	-0.849	1.254	-0.071	1	0.04	0.07	0.06	
1J	83	-48.700	-0.305	1.006	-0.849	1.254	-0.136	1	0.04	0.07	0.06	
1K	83	-48.700	-0.402	-1.016	-0.849	-1.263	-0.071	1	0.04	0.07	0.06	
1L	83	-48.700	-0.305	-1.016	-0.849	-1.263	-0.136	1	0.04	0.07	0.06	
1M	83	-43.220	-0.402	1.006	-0.849	1.254	-0.071	1	0.04	0.06	0.06	
1N	83	-43.220	-0.305	1.006	-0.849	1.254	-0.136	1	0.04	0.06	0.06	
1O	83	-43.220	-0.402	-1.016	-0.849	-1.263	-0.071	1	0.04	0.06	0.06	



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1P	83	-43.220	-0.305	-1.016	-0.849	-1.263	-0.136	1	0.04	0.06	0.06
2	83	-78.330	-1.123	-0.010	-0.002	-0.008	-0.700	1	0.00	0.11	0.03
7	83	-66.000	-1.497	-0.043	0.021	-0.025	-1.324	1	0.01	0.09	0.06

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm			
A	--	0	0.249	0.01	--	--	--	
--	Rara	43	0.002	--	42	0.00	1 / 99999	
--	Freq.	43	0.002	--	42	0.00	1 / 99999	
--	Q.Perm.	43	0.002	--	42	0.00	1 / 99999	
--	Rara	43	0.002	--	42	0.00	1 / 99999	
--	Freq.	43	0.002	--	42	0.00	1 / 99999	
--	Q.Perm.	43	0.002	--	42	0.00	1 / 99999	
--	Rara	43	0.002	--	42	0.00	1 / 99999	

**ASTA NUM. 7** NI 189 NF 28 Lungh. 82.8 cm SEZ. 10 Cc D= 0.080 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.05 0.05 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-51.497	-0.439	0.423	-0.284	0.435	-0.022	1	0.02	0.09	0.03	
1B	0	-51.497	-0.268	0.423	-0.284	0.435	-0.184	1	0.02	0.09	0.04	
1C	0	-51.497	-0.439	-0.433	-0.284	-0.443	-0.022	1	0.02	0.09	0.03	
1D	0	-51.497	-0.268	-0.433	-0.284	-0.443	-0.184	1	0.02	0.09	0.04	
1E	0	-40.423	-0.439	0.423	-0.284	0.435	-0.022	1	0.02	0.07	0.03	
1F	0	-40.423	-0.268	0.423	-0.284	0.435	-0.184	1	0.02	0.07	0.04	
1G	0	-40.423	-0.439	-0.433	-0.284	-0.443	-0.022	1	0.02	0.07	0.03	
1H	0	-40.423	-0.268	-0.433	-0.284	-0.443	-0.184	1	0.02	0.07	0.04	
1I	0	-48.697	-0.402	0.993	-0.849	1.254	-0.071	1	0.07	0.08	0.10	
1J	0	-48.697	-0.305	0.993	-0.849	1.254	-0.136	1	0.07	0.08	0.10	
1K	0	-48.697	-0.402	-1.003	-0.849	-1.263	-0.071	1	0.07	0.08	0.10	
1L	0	-48.697	-0.305	-1.003	-0.849	-1.263	-0.136	1	0.07	0.08	0.10	
1M	0	-43.223	-0.402	0.993	-0.849	1.254	-0.071	1	0.07	0.08	0.10	
1N	0	-43.223	-0.305	0.993	-0.849	1.254	-0.136	1	0.07	0.08	0.10	
1O	0	-43.223	-0.402	-1.003	-0.849	-1.263	-0.071	1	0.07	0.08	0.10	
1P	0	-43.223	-0.305	-1.003	-0.849	-1.263	-0.136	1	0.07	0.08	0.10	
2	0	-78.330	-1.123	-0.010	-0.002	-0.008	-0.700	1	0.01	0.14	0.05	
7	0	-66.000	-1.497	-0.043	0.021	-0.025	-1.324	1	0.01	0.11	0.10	
1A	41	-51.427	-0.461	0.423	-0.284	0.430	-0.159	1	0.02	0.09	0.04	
1B	41	-51.427	-0.290	0.423	-0.284	0.430	-0.350	1	0.02	0.09	0.04	
1C	41	-51.427	-0.461	-0.433	-0.284	-0.435	-0.159	1	0.02	0.09	0.04	
1D	41	-51.427	-0.290	-0.433	-0.284	-0.435	-0.350	1	0.02	0.09	0.04	
1E	41	-40.353	-0.461	0.423	-0.284	0.430	-0.159	1	0.02	0.07	0.04	
1F	41	-40.353	-0.290	0.423	-0.284	0.430	-0.350	1	0.02	0.07	0.04	
1G	41	-40.353	-0.461	-0.433	-0.284	-0.435	-0.159	1	0.02	0.07	0.04	
1H	41	-40.353	-0.290	-0.433	-0.284	-0.435	-0.350	1	0.02	0.07	0.04	
1I	41	-48.627	-0.424	0.993	-0.849	1.157	-0.214	1	0.07	0.08	0.09	
1J	41	-48.627	-0.328	0.993	-0.849	1.157	-0.294	1	0.07	0.08	0.09	
1K	41	-48.627	-0.424	-1.003	-0.849	-1.161	-0.214	1	0.07	0.08	0.09	
1L	41	-48.627	-0.328	-1.003	-0.849	-1.161	-0.294	1	0.07	0.08	0.09	
1M	41	-43.153	-0.424	0.993	-0.849	1.157	-0.214	1	0.07	0.07	0.09	
1N	41	-43.153	-0.328	0.993	-0.849	1.157	-0.294	1	0.07	0.07	0.09	
1O	41	-43.153	-0.424	-1.003	-0.849	-1.161	-0.214	1	0.07	0.07	0.09	
1P	41	-43.153	-0.328	-1.003	-0.849	-1.161	-0.294	1	0.07	0.07	0.09	
2	41	-78.240	-1.152	-0.010	-0.002	-0.004	-1.171	1	0.01	0.14	0.09	
7	41	-65.915	-1.526	-0.043	0.021	-0.007	-1.950	1	0.01	0.11	0.15	
1A	83	-51.357	-0.484	0.423	-0.284	0.426	-0.304	1	0.02	0.09	0.04	
1B	83	-51.357	-0.313	0.423	-0.284	0.426	-0.525	1	0.02	0.09	0.05	
1C	83	-51.357	-0.484	-0.433	-0.284	-0.426	-0.304	1	0.02	0.09	0.04	
1D	83	-51.357	-0.313	-0.433	-0.284	-0.426	-0.525	1	0.02	0.09	0.05	
1E	83	-40.283	-0.484	0.423	-0.284	0.426	-0.304	1	0.02	0.07	0.04	
1F	83	-40.283	-0.313	0.423	-0.284	0.426	-0.525	1	0.02	0.07	0.05	
1G	83	-40.283	-0.484	-0.433	-0.284	-0.426	-0.304	1	0.02	0.07	0.04	
1H	83	-40.283	-0.313	-0.433	-0.284	-0.426	-0.525	1	0.02	0.07	0.05	
1I	83	-48.557	-0.446	0.993	-0.849	1.060	-0.367	1	0.07	0.08	0.09	
1J	83	-48.557	-0.350	0.993	-0.849	1.060	-0.462	1	0.07	0.08	0.09	
1K	83	-48.557	-0.446	-1.003	-0.849	-1.060	-0.367	1	0.07	0.08	0.09	
1L	83	-48.557	-0.350	-1.003	-0.849	-1.060	-0.462	1	0.07	0.08	0.09	
1M	83	-43.083	-0.446	0.993	-0.849	1.060	-0.367	1	0.07	0.07	0.09	
1N	83	-43.083	-0.350	0.993	-0.849	1.060	-0.462	1	0.07	0.07	0.09	
1O	83	-43.083	-0.446	-1.003	-0.849	-1.060	-0.367	1	0.07	0.07	0.09	
1P	83	-43.083	-0.350	-1.003	-0.849	-1.060	-0.462	1	0.07	0.07	0.09	
2	83	-78.150	-1.181	-0.010	-0.002	-0.000	-1.654	1	0.01	0.14	0.13	
7	83	-65.830	-1.555	-0.043	0.021	0.010	-2.588	1	0.01	0.11	0.20	

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm			
--	--	44	0.002	0.00	--	--	--	
--	Rara	44	0.002	--	43	0.00	1 / 99999	
--	Freq.	44	0.002	--	43	0.00	1 / 99999	
--	Q.Perm.	44	0.002	--	43	0.00	1 / 99999	
--	Rara	44	0.002	--	43	0.00	1 / 99999	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

--	Freq.	44	0.002	--	43	0.00	1 / 99999
--	Q.Perm.	44	0.002	--	43	0.00	1 / 99999
--	Rara	44	0.002	--	43	0.00	1 / 99999

**ASTA NUM. 6** NI 28 NF 186 Lungh. 32.9 cm SEZ. 10 Cc D= 0.080 s= 0.0100 m

categoria: p.p. y qy tot.

qy medio: 0.05 0.05 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-51.352	-0.491	0.417	-0.284	0.426	-0.304	1	0.02	0.09	0.04	
1B	0	-51.352	-0.305	0.417	-0.284	0.426	-0.525	1	0.02	0.09	0.05	
1C	0	-51.352	-0.491	-0.426	-0.284	-0.426	-0.304	1	0.02	0.09	0.04	
1D	0	-51.352	-0.305	-0.426	-0.284	-0.426	-0.525	1	0.02	0.09	0.05	
1E	0	-40.288	-0.491	0.417	-0.284	0.426	-0.304	1	0.02	0.07	0.04	
1F	0	-40.288	-0.305	0.417	-0.284	0.426	-0.525	1	0.02	0.07	0.05	
1G	0	-40.288	-0.491	-0.426	-0.284	-0.426	-0.304	1	0.02	0.07	0.04	
1H	0	-40.288	-0.305	-0.426	-0.284	-0.426	-0.525	1	0.02	0.07	0.05	
1I	0	-48.554	-0.454	0.975	-0.849	1.060	-0.367	1	0.07	0.08	0.09	
1J	0	-48.554	-0.342	0.975	-0.849	1.060	-0.462	1	0.07	0.08	0.09	
1K	0	-48.554	-0.454	-0.984	-0.849	-1.060	-0.367	1	0.07	0.08	0.09	
1L	0	-48.554	-0.342	-0.984	-0.849	-1.060	-0.462	1	0.07	0.08	0.09	
1M	0	-43.086	-0.454	0.975	-0.849	1.060	-0.367	1	0.07	0.07	0.09	
1N	0	-43.086	-0.342	0.975	-0.849	1.060	-0.462	1	0.07	0.07	0.09	
1O	0	-43.086	-0.454	-0.984	-0.849	-1.060	-0.367	1	0.07	0.07	0.09	
1P	0	-43.086	-0.342	-0.984	-0.849	-1.060	-0.462	1	0.07	0.07	0.09	
2	0	-78.150	-1.181	-0.010	-0.002	-0.000	-1.654	1	0.01	0.14	0.13	
7	0	-65.830	-1.555	-0.043	0.021	0.010	-2.588	1	0.01	0.11	0.20	
1A	16	-51.327	-0.500	0.417	-0.284	0.458	-0.361	1	0.02	0.09	0.05	
1B	16	-51.327	-0.314	0.417	-0.284	0.458	-0.600	1	0.02	0.09	0.06	
1C	16	-51.327	-0.500	-0.426	-0.284	-0.456	-0.361	1	0.02	0.09	0.05	
1D	16	-51.327	-0.314	-0.426	-0.284	-0.456	-0.600	1	0.02	0.09	0.06	
1E	16	-40.263	-0.500	0.417	-0.284	0.458	-0.361	1	0.02	0.07	0.05	
1F	16	-40.263	-0.314	0.417	-0.284	0.458	-0.600	1	0.02	0.07	0.06	
1G	16	-40.263	-0.500	-0.426	-0.284	-0.456	-0.361	1	0.02	0.07	0.05	
1H	16	-40.263	-0.314	-0.426	-0.284	-0.456	-0.600	1	0.02	0.07	0.06	
1I	16	-48.529	-0.463	0.975	-0.849	1.102	-0.426	1	0.07	0.08	0.09	
1J	16	-48.529	-0.351	0.975	-0.849	1.102	-0.535	1	0.07	0.08	0.09	
1K	16	-48.529	-0.463	-0.984	-0.849	-1.101	-0.426	1	0.07	0.08	0.09	
1L	16	-48.529	-0.351	-0.984	-0.849	-1.101	-0.535	1	0.07	0.08	0.09	
1M	16	-43.061	-0.463	0.975	-0.849	1.102	-0.426	1	0.07	0.07	0.09	
1N	16	-43.061	-0.351	0.975	-0.849	1.102	-0.535	1	0.07	0.07	0.09	
1O	16	-43.061	-0.463	-0.984	-0.849	-1.101	-0.426	1	0.07	0.07	0.09	
1P	16	-43.061	-0.351	-0.984	-0.849	-1.101	-0.535	1	0.07	0.07	0.09	
2	16	-78.115	-1.193	-0.010	-0.002	0.001	-1.849	1	0.01	0.14	0.14	
7	16	-65.795	-1.567	-0.043	0.021	0.017	-2.844	1	0.01	0.11	0.22	
1A	33	-51.302	-0.509	0.417	-0.284	0.489	-0.419	1	0.02	0.09	0.05	
1B	33	-51.302	-0.323	0.417	-0.284	0.489	-0.677	1	0.02	0.09	0.06	
1C	33	-51.302	-0.509	-0.426	-0.284	-0.486	-0.419	1	0.02	0.09	0.05	
1D	33	-51.302	-0.323	-0.426	-0.284	-0.486	-0.677	1	0.02	0.09	0.06	
1E	33	-40.238	-0.509	0.417	-0.284	0.489	-0.419	1	0.02	0.07	0.05	
1F	33	-40.238	-0.323	0.417	-0.284	0.489	-0.677	1	0.02	0.07	0.06	
1G	33	-40.238	-0.509	-0.426	-0.284	-0.486	-0.419	1	0.02	0.07	0.05	
1H	33	-40.238	-0.323	-0.426	-0.284	-0.486	-0.677	1	0.02	0.07	0.06	
1I	33	-48.504	-0.472	0.975	-0.849	1.144	-0.487	1	0.07	0.08	0.10	
1J	33	-48.504	-0.360	0.975	-0.849	1.144	-0.609	1	0.07	0.08	0.10	
1K	33	-48.504	-0.472	-0.984	-0.849	-1.141	-0.487	1	0.07	0.08	0.10	
1L	33	-48.504	-0.360	-0.984	-0.849	-1.141	-0.609	1	0.07	0.08	0.10	
1M	33	-43.036	-0.472	0.975	-0.849	1.144	-0.487	1	0.07	0.07	0.10	
1N	33	-43.036	-0.360	0.975	-0.849	1.144	-0.609	1	0.07	0.07	0.10	
1O	33	-43.036	-0.472	-0.984	-0.849	-1.141	-0.487	1	0.07	0.07	0.10	
1P	33	-43.036	-0.360	-0.984	-0.849	-1.141	-0.609	1	0.07	0.07	0.10	
2	33	-78.080	-1.204	-0.010	-0.002	0.003	-2.046	1	0.01	0.14	0.16	
7	33	-65.760	-1.578	-0.043	0.021	0.024	-3.102	1	0.01	0.11	0.24	

MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	IR	x	fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm				
--	--	29	0.000	0.00	--	--	--	--	
--	Rara	29	0.000	--	16	-0.00	1 / 99999		
--	Freq.	29	0.000	--	16	-0.00	1 / 99999		
--	Q.Perm.	29	0.000	--	16	-0.00	1 / 99999		
--	Rara	29	0.000	--	16	-0.00	1 / 99999		
--	Freq.	29	0.000	--	16	-0.00	1 / 99999		
--	Q.Perm.	29	0.000	--	16	-0.00	1 / 99999		
--	Rara	29	0.000	--	16	-0.00	1 / 99999		

Verifica di Stabilita' NON eseguibile per sequenza di aste con sezioni diverse

Lavoro:	<b>Scala rev</b>	Intestazione lavoro:	<b>Scala</b>
Elemento:	<b>TRAVE</b>	Metodo di verifica:	<b>Eurocodice 3 - NTC 2018</b>
Gruppo:	<b>4</b>	Descrizione:	<b>travi</b>
Tabella:	<b>Tabella travi</b>		

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Tipo acciaio: **S 275**      Beta piano 'yx': **1.000**      Beta piano 'zx': **1.000**  
 Coeff. k: **1.000**      Coeff. kw: **1.000**      Carico all'estradosso della trave  
 Tipologia sismica: **Senza prescrizioni aggiuntive**  
 γM0: **1.050**    γM1': **1.050**    γM1'': **1.050**    γM2: **1.250**    γrv: **0.000**    γM0 Pf: **1.000**    γM1 Pf: **1.000**  
 Tipo collegamento: **saldato**      Connessione su un solo lato      Connessione sul lato corto (solo 'L')

**ASTA NUM. 1**    NI 186    NF 30    Lungh.    326.4 cm    SEZ. 8 Cc    D= 0.120    s= 0.0100 m

categoria: p.p. y qy tot.  
 qy medio: 0.27    0.27 kN/m

Sollecitazioni di calcolo e di verifica      Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	8.914	0.783	0.059	0.217	0.196	-0.991	1	0.01	0.01	0.03	
1B	0	8.914	1.154	0.059	0.217	0.196	-1.885	1	0.01	0.01	0.06	
1C	0	8.914	0.783	-0.047	0.217	-0.192	-0.991	1	0.01	0.01	0.03	
1D	0	8.914	1.154	-0.047	0.217	-0.192	-1.885	1	0.01	0.01	0.06	
1E	0	14.906	0.783	0.059	0.217	0.196	-0.991	1	0.01	0.02	0.03	
1F	0	14.906	1.154	0.059	0.217	0.196	-1.885	1	0.01	0.02	0.06	
1G	0	14.906	0.783	-0.047	0.217	-0.192	-0.991	1	0.01	0.02	0.03	
1H	0	14.906	1.154	-0.047	0.217	-0.192	-1.885	1	0.01	0.02	0.06	
1I	0	9.776	0.896	0.093	0.572	0.367	-1.271	1	0.02	0.01	0.04	
1J	0	9.776	1.040	0.093	0.572	0.367	-1.605	1	0.02	0.01	0.05	
1K	0	9.776	0.896	-0.081	0.572	-0.362	-1.271	1	0.02	0.01	0.04	
1L	0	9.776	1.040	-0.081	0.572	-0.362	-1.605	1	0.02	0.01	0.05	
1M	0	14.044	0.896	0.093	0.572	0.367	-1.271	1	0.02	0.02	0.04	
1N	0	14.044	1.040	0.093	0.572	0.367	-1.605	1	0.02	0.02	0.05	
1O	0	14.044	0.896	-0.081	0.572	-0.362	-1.271	1	0.02	0.02	0.04	
1P	0	14.044	1.040	-0.081	0.572	-0.362	-1.605	1	0.02	0.02	0.05	
2	0	15.680	3.079	0.012	0.002	0.005	-6.139	1	0.01	0.02	0.19	
7	0	6.465	5.024	0.045	0.009	0.040	-10.610	1	0.02	0.01	0.33	
1A	163	8.879	0.350	0.059	0.217	0.184	-0.077	1	0.01	0.01	0.01	
1B	163	8.879	0.721	0.059	0.217	0.184	-0.345	1	0.01	0.01	0.01	
1C	163	8.879	0.350	-0.047	0.217	-0.199	-0.077	1	0.01	0.01	0.01	
1D	163	8.879	0.721	-0.047	0.217	-0.199	-0.345	1	0.01	0.01	0.01	
1E	163	14.871	0.350	0.059	0.217	0.184	-0.077	1	0.01	0.02	0.01	
1F	163	14.871	0.721	0.059	0.217	0.184	-0.345	1	0.01	0.02	0.01	
1G	163	14.871	0.350	-0.047	0.217	-0.199	-0.077	1	0.01	0.02	0.01	
1H	163	14.871	0.721	-0.047	0.217	-0.199	-0.345	1	0.01	0.02	0.01	
1I	163	9.741	0.463	0.093	0.572	0.429	-0.168	1	0.02	0.01	0.01	
1J	163	9.741	0.608	0.093	0.572	0.429	-0.254	1	0.02	0.01	0.02	
1K	163	9.741	0.463	-0.081	0.572	-0.444	-0.168	1	0.02	0.01	0.01	
1L	163	9.741	0.608	-0.081	0.572	-0.444	-0.254	1	0.02	0.01	0.02	
1M	163	14.009	0.463	0.093	0.572	0.429	-0.168	1	0.02	0.02	0.01	
1N	163	14.009	0.608	0.093	0.572	0.429	-0.254	1	0.02	0.02	0.02	
1O	163	14.009	0.463	-0.081	0.572	-0.444	-0.168	1	0.02	0.02	0.01	
1P	163	14.009	0.608	-0.081	0.572	-0.444	-0.254	1	0.02	0.02	0.02	
2	163	15.635	2.516	0.012	0.002	-0.014	-1.574	1	0.01	0.02	0.05	
7	163	6.421	4.461	0.045	0.009	-0.034	-2.871	1	0.01	0.01	0.09	
1A	326	8.844	-0.083	0.059	0.217	0.171	0.130	1	0.01	0.01	0.01	
1B	326	8.844	0.288	0.059	0.217	0.171	0.488	1	0.01	0.01	0.02	
1C	326	8.844	-0.083	-0.047	0.217	-0.206	0.130	1	0.01	0.01	0.01	
1D	326	8.844	0.288	-0.047	0.217	-0.206	0.488	1	0.01	0.01	0.02	
1E	326	14.836	-0.083	0.059	0.217	0.171	0.130	1	0.01	0.02	0.01	
1F	326	14.836	0.288	0.059	0.217	0.171	0.488	1	0.01	0.02	0.02	
1G	326	14.836	-0.083	-0.047	0.217	-0.206	0.130	1	0.01	0.02	0.01	
1H	326	14.836	0.288	-0.047	0.217	-0.206	0.488	1	0.01	0.02	0.02	
1I	326	9.706	0.030	0.093	0.572	0.491	0.228	1	0.02	0.01	0.02	
1J	326	9.706	0.175	0.093	0.572	0.491	0.390	1	0.02	0.01	0.02	
1K	326	9.706	0.030	-0.081	0.572	-0.526	0.228	1	0.02	0.01	0.02	
1L	326	9.706	0.175	-0.081	0.572	-0.526	0.390	1	0.02	0.01	0.02	
1M	326	13.974	0.030	0.093	0.572	0.491	0.228	1	0.02	0.02	0.02	
1N	326	13.974	0.175	0.093	0.572	0.491	0.390	1	0.02	0.02	0.02	
1O	326	13.974	0.030	-0.081	0.572	-0.526	0.228	1	0.02	0.02	0.02	
1P	326	13.974	0.175	-0.081	0.572	-0.526	0.390	1	0.02	0.02	0.02	
2	326	15.590	1.953	0.012	0.002	-0.033	2.072	1	0.01	0.02	0.07	
7	326	6.377	3.898	0.045	0.009	-0.108	3.949	1	0.01	0.01	0.12	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γmin.	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	8.914	0.196	-0.991	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1B	8.914	0.196	-1.885	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1C	8.914	-0.206	-0.991	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1D	8.914	-0.206	-1.885	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1E	14.906	0.196	-0.991	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1F	14.906	0.196	-1.885	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1G	14.906	-0.206	-0.991	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1H	14.906	-0.206	-1.885	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1I	9.776	0.491	-1.271	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1J	9.776	0.491	-1.605	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1K	9.776	-0.526	-1.271	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1L	9.776	-0.526	-1.605	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1M	14.044	0.491	-1.271	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1N	14.044	0.491	-1.605	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1O	14.044	-0.526	-1.271	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1P	14.044	-0.526	-1.605	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
2	15.680	-0.033	-6.139	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
7	6.465	-0.108	-10.610	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Lavoro: **Scala rev** Intestazione lavoro: **Scala**  
 Elemento: **TRAVE** Metodo di verifica: **Eurocodice 3 - NTC 2018**  
 Gruppo: **4** Descrizione: **travi**  
 Tabella: **Tabella travi**  
 Tipo acciaio: **S 275** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**  
 Coeff. k: **1.000** Coeff. kw: **1.000** Carico all'estradosso della trave  
 Tipologia sismica: **Senza prescrizioni aggiuntive**  
 $\gamma_{M0}$ : **1.050**  $\gamma_{M1}$ : **1.050**  $\gamma_{M1'}$ : **1.050**  $\gamma_{M2}$ : **1.250**  $\gamma_{rv}$ : **0.000**  $\gamma_{M0}$  Pf: **1.000**  $\gamma_{M1}$  Pf: **1.000**  
 Tipo collegamento: **saldato** Connessione su un solo lato Connessione sul lato corto (solo 'L')

**ASTA NUM. 2** NI 106 NF 109 Lungh. 100.0 cm SEZ. 8 Cc D= 0.120 s= 0.0100 m

categoria: p.p. y Permanente Neve qy tot.  
 qy medio: 0.27 1.00 4.79 6.05 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
		kN			kN*m							
cm												
1A	0	-0.068	-0.257	0.261	0.000	0.000	0.000	1	0.00	0.00	0.00	
1B	0	-0.068	0.257	0.261	0.000	0.000	-0.000	1	0.00	0.00	0.00	
1C	0	-0.068	-0.257	-0.261	0.000	-0.000	0.000	1	0.00	0.00	0.00	
1D	0	-0.068	0.257	-0.261	0.000	-0.000	-0.000	1	0.00	0.00	0.00	
1E	0	0.068	-0.257	0.261	0.000	0.000	0.000	1	0.00	0.00	0.00	
1F	0	0.068	0.257	0.261	0.000	0.000	-0.000	1	0.00	0.00	0.00	
1G	0	0.068	-0.257	-0.261	0.000	-0.000	0.000	1	0.00	0.00	0.00	
1H	0	0.068	0.257	-0.261	0.000	-0.000	-0.000	1	0.00	0.00	0.00	
1I	0	-0.164	-0.218	0.172	0.000	0.000	0.000	1	0.00	0.00	0.00	
1J	0	-0.164	0.218	0.172	0.000	0.000	-0.000	1	0.00	0.00	0.00	
1K	0	-0.164	-0.218	-0.172	0.000	-0.000	0.000	1	0.00	0.00	0.00	
1L	0	-0.164	0.218	-0.172	0.000	-0.000	-0.000	1	0.00	0.00	0.00	
1M	0	0.164	-0.218	0.172	0.000	0.000	0.000	1	0.00	0.00	0.00	
1N	0	0.164	0.218	0.172	0.000	0.000	-0.000	1	0.00	0.00	0.00	
1O	0	0.164	-0.218	-0.172	0.000	-0.000	0.000	1	0.00	0.00	0.00	
1P	0	0.164	0.218	-0.172	0.000	-0.000	-0.000	1	0.00	0.00	0.00	
2	0	0.000	-0.000	-0.000	0.000	0.000	0.000	1	0.00	0.00	0.00	
7	0	0.000	-0.000	-0.000	0.000	0.000	0.000	1	0.00	0.00	0.00	
1A	50	-0.068	-0.890	0.261	0.000	-0.131	-0.287	1	0.00	0.00	0.01	
1B	50	-0.068	-0.376	0.261	0.000	-0.131	-0.030	1	0.00	0.00	0.00	
1C	50	-0.068	-0.890	-0.261	0.000	0.131	-0.287	1	0.00	0.00	0.01	
1D	50	-0.068	-0.376	-0.261	0.000	0.131	-0.030	1	0.00	0.00	0.00	
1E	50	0.068	-0.890	0.261	0.000	-0.131	-0.287	1	0.00	0.00	0.01	
1F	50	0.068	-0.376	0.261	0.000	-0.131	-0.030	1	0.00	0.00	0.00	
1G	50	0.068	-0.890	-0.261	0.000	0.131	-0.287	1	0.00	0.00	0.01	
1H	50	0.068	-0.376	-0.261	0.000	0.131	-0.030	1	0.00	0.00	0.00	
1I	50	-0.164	-0.851	0.172	0.000	-0.086	-0.267	1	0.00	0.00	0.01	
1J	50	-0.164	-0.415	0.172	0.000	-0.086	-0.050	1	0.00	0.00	0.00	
1K	50	-0.164	-0.851	-0.172	0.000	0.086	-0.267	1	0.00	0.00	0.01	
1L	50	-0.164	-0.415	-0.172	0.000	0.086	-0.050	1	0.00	0.00	0.00	
1M	50	0.164	-0.851	0.172	0.000	-0.086	-0.267	1	0.00	0.00	0.01	
1N	50	0.164	-0.415	0.172	0.000	-0.086	-0.050	1	0.00	0.00	0.00	
1O	50	0.164	-0.851	-0.172	0.000	0.086	-0.267	1	0.00	0.00	0.01	
1P	50	0.164	-0.415	-0.172	0.000	0.086	-0.050	1	0.00	0.00	0.00	
2	50	0.000	-2.618	-0.000	0.000	-0.000	-0.655	1	0.01	0.00	0.02	
7	50	0.000	-4.412	-0.000	0.000	-0.000	-1.103	1	0.01	0.00	0.03	
1A	100	-0.068	-1.523	0.261	0.000	-0.261	-0.890	1	0.00	0.00	0.03	
1B	100	-0.068	-1.009	0.261	0.000	-0.261	-0.376	1	0.00	0.00	0.01	
1C	100	-0.068	-1.523	-0.261	0.000	0.261	-0.890	1	0.00	0.00	0.03	
1D	100	-0.068	-1.009	-0.261	0.000	0.261	-0.376	1	0.00	0.00	0.01	
1E	100	0.068	-1.523	0.261	0.000	-0.261	-0.890	1	0.00	0.00	0.03	
1F	100	0.068	-1.009	0.261	0.000	-0.261	-0.376	1	0.00	0.00	0.01	
1G	100	0.068	-1.523	-0.261	0.000	0.261	-0.890	1	0.00	0.00	0.03	
1H	100	0.068	-1.009	-0.261	0.000	0.261	-0.376	1	0.00	0.00	0.01	
1I	100	-0.164	-1.484	0.172	0.000	-0.172	-0.851	1	0.00	0.00	0.03	
1J	100	-0.164	-1.048	0.172	0.000	-0.172	-0.416	1	0.00	0.00	0.01	
1K	100	-0.164	-1.484	-0.172	0.000	0.172	-0.851	1	0.00	0.00	0.03	
1L	100	-0.164	-1.048	-0.172	0.000	0.172	-0.416	1	0.00	0.00	0.01	
1M	100	0.164	-1.484	0.172	0.000	-0.172	-0.851	1	0.00	0.00	0.03	
1N	100	0.164	-1.048	0.172	0.000	-0.172	-0.416	1	0.00	0.00	0.01	
1O	100	0.164	-1.484	-0.172	0.000	0.172	-0.851	1	0.00	0.00	0.03	
1P	100	0.164	-1.048	-0.172	0.000	0.172	-0.416	1	0.00	0.00	0.01	
2	100	0.000	-5.235	-0.000	0.000	0.000	-2.618	1	0.02	0.00	0.08	
7	100	0.000	-8.824	-0.000	0.000	0.000	-4.412	1	0.03	0.00	0.14	

MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm			
--	--	43	0.800	0.03	--	--	--	
--	Rara	40	0.483	--	45	0.00	1 / 54882	
--	Freq.	40	0.180	--	45	0.00	1 / 99999	
--	Q.Perm.	37	0.089	--	45	0.00	1 / 99999	
--	Rara	40	0.483	--	45	0.00	1 / 54882	
--	Freq.	40	0.180	--	45	0.00	1 / 99999	
--	Q.Perm.	37	0.089	--	45	0.00	1 / 99999	
--	Rara	40	0.483	--	45	0.00	1 / 54882	

**ASTA NUM. 3** NI 109 NF 31 Lungh. 100.0 cm SEZ. 8 Cc D= 0.120 s= 0.0100 m

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

categoria: p.p. y Permanente Neve qy tot.  
 qy medio: 0.27 1.00 4.79 6.05 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-0.068	0.963	0.244	0.000	0.244	-0.330	1	0.00	0.00	0.01	
1B	0	-0.068	1.569	0.244	0.000	0.244	-0.936	1	0.00	0.00	0.03	
1C	0	-0.068	0.963	-0.244	0.000	-0.244	-0.330	1	0.00	0.00	0.01	
1D	0	-0.068	1.569	-0.244	0.000	-0.244	-0.936	1	0.00	0.00	0.03	
1E	0	0.068	0.963	0.244	0.000	0.244	-0.330	1	0.00	0.00	0.01	
1F	0	0.068	1.569	0.244	0.000	0.244	-0.936	1	0.00	0.00	0.03	
1G	0	0.068	0.963	-0.244	0.000	-0.244	-0.330	1	0.00	0.00	0.01	
1H	0	0.068	1.569	-0.244	0.000	-0.244	-0.936	1	0.00	0.00	0.03	
1I	0	-0.164	1.056	0.168	0.000	0.168	-0.423	1	0.00	0.00	0.01	
1J	0	-0.164	1.476	0.168	0.000	0.168	-0.843	1	0.00	0.00	0.03	
1K	0	-0.164	1.056	-0.168	0.000	-0.168	-0.423	1	0.00	0.00	0.01	
1L	0	-0.164	1.476	-0.168	0.000	-0.168	-0.843	1	0.00	0.00	0.03	
1M	0	0.164	1.056	0.168	0.000	0.168	-0.423	1	0.00	0.00	0.01	
1N	0	0.164	1.476	0.168	0.000	0.168	-0.843	1	0.00	0.00	0.03	
1O	0	0.164	1.056	-0.168	0.000	-0.168	-0.423	1	0.00	0.00	0.01	
1P	0	0.164	1.476	-0.168	0.000	-0.168	-0.843	1	0.00	0.00	0.03	
2	0	-0.000	5.235	-0.000	0.000	0.000	-2.618	1	0.02	0.00	0.08	
7	0	0.000	8.824	-0.000	0.000	0.000	-4.412	1	0.03	0.00	0.14	
1A	50	-0.068	0.936	0.244	0.000	0.122	-0.007	1	0.00	0.00	0.00	
1B	50	-0.068	0.936	0.244	0.000	0.122	-0.310	1	0.00	0.00	0.01	
1C	50	-0.068	0.330	-0.244	0.000	-0.122	-0.007	1	0.00	0.00	0.00	
1D	50	-0.068	0.936	-0.244	0.000	-0.122	-0.310	1	0.00	0.00	0.01	
1E	50	0.068	0.330	0.244	0.000	0.122	-0.007	1	0.00	0.00	0.00	
1F	50	0.068	0.936	0.244	0.000	0.122	-0.310	1	0.00	0.00	0.01	
1G	50	0.068	0.330	-0.244	0.000	-0.122	-0.007	1	0.00	0.00	0.00	
1H	50	0.068	0.936	-0.244	0.000	-0.122	-0.310	1	0.00	0.00	0.01	
1I	50	-0.164	0.423	0.168	0.000	0.084	-0.053	1	0.00	0.00	0.00	
1J	50	-0.164	0.843	0.168	0.000	0.084	-0.263	1	0.00	0.00	0.01	
1K	50	-0.164	0.423	-0.168	0.000	-0.084	-0.053	1	0.00	0.00	0.00	
1L	50	-0.164	0.843	-0.168	0.000	-0.084	-0.263	1	0.00	0.00	0.01	
1M	50	0.164	0.423	0.168	0.000	0.084	-0.053	1	0.00	0.00	0.00	
1N	50	0.164	0.843	0.168	0.000	0.084	-0.263	1	0.00	0.00	0.01	
1O	50	0.164	0.423	-0.168	0.000	-0.084	-0.053	1	0.00	0.00	0.00	
1P	50	0.164	0.843	-0.168	0.000	-0.084	-0.263	1	0.00	0.00	0.01	
2	50	-0.000	2.617	-0.000	0.000	-0.000	-0.655	1	0.01	0.00	0.02	
7	50	0.000	4.412	-0.000	0.000	-0.000	-1.103	1	0.01	0.00	0.03	
1A	100	-0.068	-0.303	0.244	0.000	0.000	0.000	1	0.00	0.00	0.00	
1B	100	-0.068	0.303	0.244	0.000	0.000	0.000	1	0.00	0.00	0.00	
1C	100	-0.068	-0.303	-0.244	0.000	0.000	0.000	1	0.00	0.00	0.00	
1D	100	-0.068	0.303	-0.244	0.000	0.000	0.000	1	0.00	0.00	0.00	
1E	100	0.068	-0.303	0.244	0.000	0.000	0.000	1	0.00	0.00	0.00	
1F	100	0.068	0.303	0.244	0.000	0.000	0.000	1	0.00	0.00	0.00	
1G	100	0.068	-0.303	-0.244	0.000	0.000	0.000	1	0.00	0.00	0.00	
1H	100	0.068	0.303	-0.244	0.000	0.000	0.000	1	0.00	0.00	0.00	
1I	100	-0.164	-0.210	0.168	0.000	0.000	0.000	1	0.00	0.00	0.00	
1J	100	-0.164	0.210	0.168	0.000	0.000	0.000	1	0.00	0.00	0.00	
1K	100	-0.164	-0.210	-0.168	0.000	0.000	0.000	1	0.00	0.00	0.00	
1L	100	-0.164	0.210	-0.168	0.000	0.000	0.000	1	0.00	0.00	0.00	
1M	100	0.164	-0.210	0.168	0.000	0.000	0.000	1	0.00	0.00	0.00	
1N	100	0.164	0.210	0.168	0.000	0.000	0.000	1	0.00	0.00	0.00	
1O	100	0.164	-0.210	-0.168	0.000	0.000	0.000	1	0.00	0.00	0.00	
1P	100	0.164	0.210	-0.168	0.000	0.000	0.000	1	0.00	0.00	0.00	
2	100	-0.000	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.00	0.00	
7	100	0.000	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.00	0.00	

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	IR	x	fmax.	fmax	fmax / l	Nota
		cm	kN*m			cm			
--	--	57	0.800	0.03	--	--	--	--	
--	Rara	60	0.483	--	55	0.00	1 / 54882		
--	Freq.	60	0.180	--	55	0.00	1 / 99999		
--	Q.Perm.	63	0.089	--	55	0.00	1 / 99999		
--	Rara	60	0.483	--	55	0.00	1 / 54882		
--	Freq.	60	0.180	--	55	0.00	1 / 99999		
--	Q.Perm.	63	0.089	--	55	0.00	1 / 99999		
--	Rara	60	0.483	--	55	0.00	1 / 54882		

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γmin.	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-0.068	-0.261	-0.890	1	0.8916	1.0001	0.9999	--	--	0.00	--	0.04	Snell. 'zx'= 51
1B	-0.068	-0.261	-0.936	1	0.8916	1.0001	0.9999	--	--	0.00	--	0.04	Snell. 'zx'= 51
1C	-0.068	0.261	-0.890	1	0.8916	1.0001	0.9999	--	--	0.00	--	0.04	Snell. 'zx'= 51
1D	-0.068	0.261	-0.936	1	0.8916	1.0001	0.9999	--	--	0.00	--	0.04	Snell. 'zx'= 51
1E	0.068	-0.261	-0.890	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1F	0.068	-0.261	-0.936	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1G	0.068	0.261	-0.890	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1H	0.068	0.261	-0.936	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1I	-0.164	-0.172	-0.851	1	0.8916	1.0002	0.9998	--	--	0.00	--	0.03	Snell. 'zx'= 51

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1J	-0.164	-0.172	-0.843	1	0.8916	1.0002	0.9998	--	--	0.00	--	0.03	Snell.	'zx'='	51
1K	-0.164	0.172	-0.851	1	0.8916	1.0002	0.9998	--	--	0.00	--	0.03	Snell.	'zx'='	51
1L	-0.164	0.172	-0.843	1	0.8916	1.0002	0.9998	--	--	0.00	--	0.03	Snell.	'zx'='	51
1M	0.164	-0.172	-0.851	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'='	51
1N	0.164	-0.172	-0.843	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'='	51
1O	0.164	0.172	-0.851	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'='	51
1P	0.164	0.172	-0.843	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'='	51
2	-0.000	-0.000	-2.618	1	0.8916	1.0000	1.0000	--	--	0.00	--	0.08	Snell.	'zx'='	51
7	0.000	-0.000	-4.412	1	0.8916	1.0000	1.0000	--	--	--	--	--	Snell.	'zx'='	51

**ASTA NUM. 4** NI 187 NF 185 Lungh. 100.0 cm SEZ. 8 Cc D= 0.120 s= 0.0100 m

categoria: p.p. y Permanente Neve qy tot.  
qy medio: 0.27 1.00 4.79 6.05 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m			-----	-----	-----	-----	-----
1A	0	-0.074	-0.429	0.316	0.000	0.000	0.000	1	0.00	0.00	0.00	
1B	0	-0.074	0.429	0.316	0.000	0.000	-0.000	1	0.00	0.00	0.00	
1C	0	-0.074	-0.429	-0.316	0.000	-0.000	0.000	1	0.00	0.00	0.00	
1D	0	-0.074	0.429	-0.316	0.000	-0.000	-0.000	1	0.00	0.00	0.00	
1E	0	0.074	-0.429	0.316	0.000	0.000	0.000	1	0.00	0.00	0.00	
1F	0	0.074	0.429	0.316	0.000	0.000	-0.000	1	0.00	0.00	0.00	
1G	0	0.074	-0.429	-0.316	0.000	-0.000	0.000	1	0.00	0.00	0.00	
1H	0	0.074	0.429	-0.316	0.000	-0.000	-0.000	1	0.00	0.00	0.00	
1I	0	-0.187	-0.276	0.193	0.000	0.000	0.000	1	0.00	0.00	0.00	
1J	0	-0.187	0.276	0.193	0.000	0.000	-0.000	1	0.00	0.00	0.00	
1K	0	-0.187	-0.276	-0.193	0.000	-0.000	0.000	1	0.00	0.00	0.00	
1L	0	-0.187	0.276	-0.193	0.000	-0.000	-0.000	1	0.00	0.00	0.00	
1M	0	0.187	-0.276	0.193	0.000	0.000	0.000	1	0.00	0.00	0.00	
1N	0	0.187	0.276	0.193	0.000	0.000	-0.000	1	0.00	0.00	0.00	
1O	0	0.187	-0.276	-0.193	0.000	-0.000	0.000	1	0.00	0.00	0.00	
1P	0	0.187	0.276	-0.193	0.000	-0.000	-0.000	1	0.00	0.00	0.00	
2	0	0.000	-0.000	0.000	0.000	0.000	0.000	1	0.00	0.00	0.00	
7	0	0.000	-0.000	0.000	0.000	0.000	0.000	1	0.00	0.00	0.00	
1A	50	-0.074	-1.062	0.316	0.000	-0.158	-0.373	1	0.00	0.00	0.01	
1B	50	-0.074	-0.204	0.316	0.000	-0.158	0.056	1	0.00	0.00	0.01	
1C	50	-0.074	-1.062	-0.316	0.000	0.158	-0.373	1	0.00	0.00	0.01	
1D	50	-0.074	-0.204	-0.316	0.000	0.158	0.056	1	0.00	0.00	0.01	
1E	50	0.074	-1.062	0.316	0.000	-0.158	-0.373	1	0.00	0.00	0.01	
1F	50	0.074	-0.204	0.316	0.000	-0.158	0.056	1	0.00	0.00	0.01	
1G	50	0.074	-1.062	-0.316	0.000	0.158	-0.373	1	0.00	0.00	0.01	
1H	50	0.074	-0.204	-0.316	0.000	0.158	0.056	1	0.00	0.00	0.01	
1I	50	-0.187	-0.909	0.193	0.000	-0.096	-0.296	1	0.00	0.00	0.01	
1J	50	-0.187	-0.357	0.193	0.000	-0.096	-0.020	1	0.00	0.00	0.00	
1K	50	-0.187	-0.909	-0.193	0.000	0.096	-0.296	1	0.00	0.00	0.01	
1L	50	-0.187	-0.357	-0.193	0.000	0.096	-0.020	1	0.00	0.00	0.00	
1M	50	0.187	-0.909	0.193	0.000	-0.096	-0.296	1	0.00	0.00	0.01	
1N	50	0.187	-0.357	0.193	0.000	-0.096	-0.020	1	0.00	0.00	0.00	
1O	50	0.187	-0.909	-0.193	0.000	0.096	-0.296	1	0.00	0.00	0.01	
1P	50	0.187	-0.357	-0.193	0.000	0.096	-0.020	1	0.00	0.00	0.00	
2	50	0.000	-2.618	0.000	0.000	0.000	-0.655	1	0.01	0.00	0.02	
7	50	0.000	-4.412	0.000	0.000	0.000	-1.103	1	0.01	0.00	0.03	
1A	100	-0.074	-1.695	0.316	0.000	-0.316	-1.062	1	0.01	0.00	0.03	
1B	100	-0.074	-0.837	0.316	0.000	-0.316	-0.204	1	0.00	0.00	0.01	
1C	100	-0.074	-1.695	-0.316	0.000	0.316	-1.062	1	0.01	0.00	0.03	
1D	100	-0.074	-0.837	-0.316	0.000	0.316	-0.204	1	0.00	0.00	0.01	
1E	100	0.074	-1.695	0.316	0.000	-0.316	-1.062	1	0.01	0.00	0.03	
1F	100	0.074	-0.837	0.316	0.000	-0.316	-0.204	1	0.00	0.00	0.01	
1G	100	0.074	-1.695	-0.316	0.000	0.316	-1.062	1	0.01	0.00	0.03	
1H	100	0.074	-0.837	-0.316	0.000	0.316	-0.204	1	0.00	0.00	0.01	
1I	100	-0.187	-1.542	0.193	0.000	-0.193	-0.909	1	0.00	0.00	0.03	
1J	100	-0.187	-0.990	0.193	0.000	-0.193	-0.357	1	0.00	0.00	0.01	
1K	100	-0.187	-1.542	-0.193	0.000	0.193	-0.909	1	0.00	0.00	0.03	
1L	100	-0.187	-0.990	-0.193	0.000	0.193	-0.357	1	0.00	0.00	0.01	
1M	100	0.187	-1.542	0.193	0.000	-0.193	-0.909	1	0.00	0.00	0.03	
1N	100	0.187	-0.990	0.193	0.000	-0.193	-0.357	1	0.00	0.00	0.01	
1O	100	0.187	-1.542	-0.193	0.000	0.193	-0.909	1	0.00	0.00	0.03	
1P	100	0.187	-0.990	-0.193	0.000	0.193	-0.357	1	0.00	0.00	0.01	
2	100	0.000	-5.235	0.000	0.000	0.000	-2.618	1	0.02	0.00	0.08	
7	100	0.000	-8.824	0.000	0.000	0.000	-4.412	1	0.03	0.00	0.14	

MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
--	--	cm	kN*m	-----	cm	-----	-----	-----
--	--	43	0.800	0.03	--	--	--	
--	Rara	40	0.483	--	45	0.00	1 / 54882	
--	Freq.	40	0.180	--	45	0.00	1 / 99999	
--	Q.Perm.	37	0.089	--	45	0.00	1 / 99999	
--	Rara	40	0.483	--	45	0.00	1 / 54882	
--	Freq.	40	0.180	--	45	0.00	1 / 99999	
--	Q.Perm.	37	0.089	--	45	0.00	1 / 99999	
--	Rara	40	0.483	--	45	0.00	1 / 54882	

**ASTA NUM. 5** NI 185 NF 188 Lungh. 100.0 cm SEZ. 8 Cc D= 0.120 s= 0.0100 m

categoria: p.p. y Permanente Neve qy tot.  
qy medio: 0.27 1.00 4.79 6.05 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

	cm	kN			kN*m						
1A	0	-0.074	0.869	0.399	0.000	0.399	-0.236	1	0.00	0.00	0.01
1B	0	-0.074	1.663	0.399	0.000	0.399	-1.030	1	0.00	0.00	0.03
1C	0	-0.074	0.869	-0.399	0.000	-0.399	-0.236	1	0.00	0.00	0.01
1D	0	-0.074	1.663	-0.399	0.000	-0.399	-1.030	1	0.00	0.00	0.03
1E	0	0.074	0.869	0.399	0.000	0.399	-0.236	1	0.00	0.00	0.01
1F	0	0.074	1.663	0.399	0.000	0.399	-1.030	1	0.00	0.00	0.03
1G	0	0.074	0.869	-0.399	0.000	-0.399	-0.236	1	0.00	0.00	0.01
1H	0	0.074	1.663	-0.399	0.000	-0.399	-1.030	1	0.00	0.00	0.03
1I	0	-0.187	0.951	0.283	0.000	0.283	-0.318	1	0.00	0.00	0.01
1J	0	-0.187	1.581	0.283	0.000	0.283	-0.948	1	0.00	0.00	0.03
1K	0	-0.187	0.951	-0.283	0.000	-0.283	-0.318	1	0.00	0.00	0.01
1L	0	-0.187	1.581	-0.283	0.000	-0.283	-0.948	1	0.00	0.00	0.03
1M	0	0.187	0.951	0.283	0.000	0.283	-0.318	1	0.00	0.00	0.01
1N	0	0.187	1.581	0.283	0.000	0.283	-0.948	1	0.00	0.00	0.03
1O	0	0.187	0.951	-0.283	0.000	-0.283	-0.318	1	0.00	0.00	0.01
1P	0	0.187	1.581	-0.283	0.000	-0.283	-0.948	1	0.00	0.00	0.03
2	0	-0.000	5.235	0.000	0.000	0.000	-2.618	1	0.02	0.00	0.08
7	0	-0.000	8.824	0.000	0.000	0.000	-4.412	1	0.03	0.00	0.14
1A	50	-0.074	0.236	0.399	0.000	0.200	0.040	1	0.00	0.00	0.01
1B	50	-0.074	1.030	0.399	0.000	0.200	-0.357	1	0.00	0.00	0.01
1C	50	-0.074	0.236	-0.399	0.000	-0.200	0.040	1	0.00	0.00	0.01
1D	50	-0.074	1.030	-0.399	0.000	-0.200	-0.357	1	0.00	0.00	0.01
1E	50	0.074	0.236	0.399	0.000	0.200	0.040	1	0.00	0.00	0.01
1F	50	0.074	1.030	0.399	0.000	0.200	-0.357	1	0.00	0.00	0.01
1G	50	0.074	0.236	-0.399	0.000	-0.200	0.040	1	0.00	0.00	0.01
1H	50	0.074	1.030	-0.399	0.000	-0.200	-0.357	1	0.00	0.00	0.01
1I	50	-0.187	0.318	0.283	0.000	0.141	-0.001	1	0.00	0.00	0.00
1J	50	-0.187	0.948	0.283	0.000	0.141	-0.316	1	0.00	0.00	0.01
1K	50	-0.187	0.318	-0.283	0.000	-0.141	-0.001	1	0.00	0.00	0.00
1L	50	-0.187	0.948	-0.283	0.000	-0.141	-0.316	1	0.00	0.00	0.01
1M	50	0.187	0.318	0.283	0.000	0.141	-0.001	1	0.00	0.00	0.00
1N	50	0.187	0.948	0.283	0.000	0.141	-0.316	1	0.00	0.00	0.01
1O	50	0.187	0.318	-0.283	0.000	-0.141	-0.001	1	0.00	0.00	0.00
1P	50	0.187	0.948	-0.283	0.000	-0.141	-0.316	1	0.00	0.00	0.01
2	50	-0.000	2.618	0.000	0.000	0.000	-0.655	1	0.01	0.00	0.02
7	50	-0.000	4.412	0.000	0.000	0.000	-1.103	1	0.01	0.00	0.03
1A	100	-0.074	-0.397	0.399	0.000	0.000	0.000	1	0.00	0.00	0.00
1B	100	-0.074	0.397	0.399	0.000	0.000	0.000	1	0.00	0.00	0.00
1C	100	-0.074	-0.397	-0.399	0.000	0.000	0.000	1	0.00	0.00	0.00
1D	100	-0.074	0.397	-0.399	0.000	0.000	0.000	1	0.00	0.00	0.00
1E	100	0.074	-0.397	0.399	0.000	0.000	0.000	1	0.00	0.00	0.00
1F	100	0.074	0.397	0.399	0.000	0.000	0.000	1	0.00	0.00	0.00
1G	100	0.074	-0.397	-0.399	0.000	0.000	0.000	1	0.00	0.00	0.00
1H	100	0.074	0.397	-0.399	0.000	0.000	0.000	1	0.00	0.00	0.00
1I	100	-0.187	-0.315	0.283	0.000	-0.000	0.000	1	0.00	0.00	0.00
1J	100	-0.187	0.315	0.283	0.000	-0.000	0.000	1	0.00	0.00	0.00
1K	100	-0.187	-0.315	-0.283	0.000	0.000	0.000	1	0.00	0.00	0.00
1L	100	-0.187	0.315	-0.283	0.000	0.000	0.000	1	0.00	0.00	0.00
1M	100	0.187	-0.315	0.283	0.000	-0.000	0.000	1	0.00	0.00	0.00
1N	100	0.187	0.315	0.283	0.000	-0.000	0.000	1	0.00	0.00	0.00
1O	100	0.187	-0.315	-0.283	0.000	0.000	0.000	1	0.00	0.00	0.00
1P	100	0.187	0.315	-0.283	0.000	0.000	0.000	1	0.00	0.00	0.00
2	100	-0.000	0.000	0.000	0.000	0.000	0.000	1	0.00	0.00	0.00
7	100	-0.000	0.000	0.000	0.000	0.000	0.000	1	0.00	0.00	0.00

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm			
--	--	57	0.800	0.03	--	--	--	
--	Rara	60	0.483	--	55	0.00	1 / 54882	
--	Freq.	60	0.180	--	55	0.00	1 / 99999	
--	Q.Perm.	63	0.089	--	55	0.00	1 / 99999	
--	Rara	60	0.483	--	55	0.00	1 / 54882	
--	Freq.	60	0.180	--	55	0.00	1 / 99999	
--	Q.Perm.	63	0.089	--	55	0.00	1 / 99999	
--	Rara	60	0.483	--	55	0.00	1 / 54882	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γmin.	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-0.074	0.399	-1.062	1	0.8916	1.0001	0.9999	--	--	0.00	--	0.05	Snell. 'zx'= 51
1B	-0.074	0.399	-1.030	1	0.8916	1.0001	0.9999	--	--	0.00	--	0.05	Snell. 'zx'= 51
1C	-0.074	-0.399	-1.062	1	0.8916	1.0001	0.9999	--	--	0.00	--	0.05	Snell. 'zx'= 51
1D	-0.074	-0.399	-1.030	1	0.8916	1.0001	0.9999	--	--	0.00	--	0.05	Snell. 'zx'= 51
1E	0.074	0.399	-1.062	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1F	0.074	0.399	-1.030	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1G	0.074	-0.399	-1.062	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1H	0.074	-0.399	-1.030	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1I	-0.187	0.283	-0.909	1	0.8916	1.0002	0.9998	--	--	0.00	--	0.04	Snell. 'zx'= 51
1J	-0.187	0.283	-0.948	1	0.8916	1.0002	0.9998	--	--	0.00	--	0.04	Snell. 'zx'= 51
1K	-0.187	-0.283	-0.909	1	0.8916	1.0002	0.9998	--	--	0.00	--	0.04	Snell. 'zx'= 51
1L	-0.187	-0.283	-0.948	1	0.8916	1.0002	0.9998	--	--	0.00	--	0.04	Snell. 'zx'= 51
1M	0.187	0.283	-0.909	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1N	0.187	0.283	-0.948	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1O	0.187	-0.283	-0.909	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51
1P	0.187	-0.283	-0.948	1	0.8916	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 51

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

2 0.000 0.000 -2.618 1 0.8916 1.0000 1.0000 -- -- -- -- -- Snell. 'zx'= 51  
 7 0.000 0.000 -4.412 1 0.8916 1.0000 1.0000 --- --- --- --- --- Snell. 'zx'= 51

**ASTA NUM. 8** NI 109 NF 186 Lungh. 107.4 cm SEZ. 8 Cc D= 0.120 s= 0.0100 m

categoria: p.p. y qy tot.  
 qy medio: 0.25 0.25 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-0.219	-3.308	0.286	-0.243	0.118	0.000	1	0.01	0.00	0.00	
1B	0	-0.219	-1.506	0.286	-0.243	0.118	-0.000	1	0.01	0.00	0.00	
1C	0	-0.219	-3.308	-0.286	-0.243	-0.118	0.000	1	0.01	0.00	0.00	
1D	0	-0.219	-1.506	-0.286	-0.243	-0.118	-0.000	1	0.01	0.00	0.00	
1E	0	1.789	-3.308	0.286	-0.243	0.118	0.000	1	0.01	0.00	0.00	
1F	0	1.789	-1.506	0.286	-0.243	0.118	-0.000	1	0.01	0.00	0.00	
1G	0	1.789	-3.308	-0.286	-0.243	-0.118	0.000	1	0.01	0.00	0.00	
1H	0	1.789	-1.506	-0.286	-0.243	-0.118	-0.000	1	0.01	0.00	0.00	
1I	0	0.179	-2.814	0.693	-0.325	0.151	0.000	1	0.01	0.00	0.00	
1J	0	0.179	-2.000	0.693	-0.325	0.151	-0.000	1	0.01	0.00	0.00	
1K	0	0.179	-2.814	-0.693	-0.325	-0.151	0.000	1	0.01	0.00	0.00	
1L	0	0.179	-2.000	-0.693	-0.325	-0.151	-0.000	1	0.01	0.00	0.00	
1M	0	1.391	-2.814	0.693	-0.325	0.151	0.000	1	0.01	0.00	0.00	
1N	0	1.391	-2.000	0.693	-0.325	0.151	-0.000	1	0.01	0.00	0.00	
1O	0	1.391	-2.814	-0.693	-0.325	-0.151	0.000	1	0.01	0.00	0.00	
1P	0	1.391	-2.000	-0.693	-0.325	-0.151	-0.000	1	0.01	0.00	0.00	
2	0	3.246	-9.954	0.000	-0.000	0.000	0.000	1	0.03	0.00	0.00	
7	0	5.472	-16.780	0.000	-0.000	0.000	0.000	1	0.05	0.01	0.00	
1A	54	-0.175	-3.444	0.286	-0.243	0.231	-1.813	1	0.01	0.00	0.06	
1B	54	-0.175	-1.642	0.286	-0.243	0.231	-0.846	1	0.01	0.00	0.03	
1C	54	-0.175	-3.444	-0.286	-0.243	-0.231	-1.813	1	0.01	0.00	0.06	
1D	54	-0.175	-1.642	-0.286	-0.243	-0.231	-0.846	1	0.01	0.00	0.03	
1E	54	1.833	-3.444	0.286	-0.243	0.231	-1.813	1	0.01	0.00	0.06	
1F	54	1.833	-1.642	0.286	-0.243	0.231	-0.846	1	0.01	0.00	0.03	
1G	54	1.833	-3.444	-0.286	-0.243	-0.231	-1.813	1	0.01	0.00	0.06	
1H	54	1.833	-1.642	-0.286	-0.243	-0.231	-0.846	1	0.01	0.00	0.03	
1I	54	0.224	-2.950	0.693	-0.325	0.482	-1.548	1	0.01	0.00	0.05	
1J	54	0.224	-2.136	0.693	-0.325	0.482	-1.111	1	0.01	0.00	0.04	
1K	54	0.224	-2.950	-0.693	-0.325	-0.482	-1.548	1	0.01	0.00	0.05	
1L	54	0.224	-2.136	-0.693	-0.325	-0.482	-1.111	1	0.01	0.00	0.04	
1M	54	1.435	-2.950	0.693	-0.325	0.482	-1.548	1	0.01	0.00	0.05	
1N	54	1.435	-2.136	0.693	-0.325	0.482	-1.111	1	0.01	0.00	0.04	
1O	54	1.435	-2.950	-0.693	-0.325	-0.482	-1.548	1	0.01	0.00	0.05	
1P	54	1.435	-2.136	-0.693	-0.325	-0.482	-1.111	1	0.01	0.00	0.04	
2	54	3.304	-10.132	0.000	-0.000	0.000	-5.393	1	0.03	0.00	0.17	
7	54	5.530	-16.955	0.000	-0.000	0.000	-9.058	1	0.05	0.01	0.29	
1A	107	-0.130	-3.580	0.286	-0.243	0.344	-3.699	1	0.01	0.00	0.12	
1B	107	-0.130	-1.778	0.286	-0.243	0.344	-1.765	1	0.01	0.00	0.06	
1C	107	-0.130	-3.580	-0.286	-0.243	-0.344	-3.699	1	0.01	0.00	0.12	
1D	107	-0.130	-1.778	-0.286	-0.243	-0.344	-1.765	1	0.01	0.00	0.06	
1E	107	1.878	-3.580	0.286	-0.243	0.344	-3.699	1	0.01	0.00	0.12	
1F	107	1.878	-1.778	0.286	-0.243	0.344	-1.765	1	0.01	0.00	0.06	
1G	107	1.878	-3.580	-0.286	-0.243	-0.344	-3.699	1	0.01	0.00	0.12	
1H	107	1.878	-1.778	-0.286	-0.243	-0.344	-1.765	1	0.01	0.00	0.06	
1I	107	0.268	-3.086	0.693	-0.325	0.813	-3.169	1	0.01	0.00	0.10	
1J	107	0.268	-2.272	0.693	-0.325	0.813	-2.295	1	0.01	0.00	0.08	
1K	107	0.268	-3.086	-0.693	-0.325	-0.813	-3.169	1	0.01	0.00	0.10	
1L	107	0.268	-2.272	-0.693	-0.325	-0.813	-2.295	1	0.01	0.00	0.08	
1M	107	1.480	-3.086	0.693	-0.325	0.813	-3.169	1	0.01	0.00	0.10	
1N	107	1.480	-2.272	0.693	-0.325	0.813	-2.295	1	0.01	0.00	0.08	
1O	107	1.480	-3.086	-0.693	-0.325	-0.813	-3.169	1	0.01	0.00	0.10	
1P	107	1.480	-2.272	-0.693	-0.325	-0.813	-2.295	1	0.01	0.00	0.08	
2	107	3.361	-10.310	0.000	-0.000	0.000	-10.880	1	0.03	0.00	0.34	
7	107	5.587	-17.130	0.000	-0.000	0.000	-18.210	1	0.05	0.01	0.57	

MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
--	--	--	--	--	--	--	--	--
		cm	kN*m		cm			
--	--	54	0.000	0.00	--	--	--	
--	Rara	54	0.000	--	61	-0.00	1 / 99999	
--	Freq.	54	0.000	--	61	-0.00	1 / 99999	
--	Q.Perm.	54	0.000	--	61	-0.00	1 / 99999	
--	Rara	54	0.000	--	61	-0.00	1 / 99999	
--	Freq.	54	0.000	--	61	-0.00	1 / 99999	
--	Q.Perm.	54	0.000	--	61	-0.00	1 / 99999	
--	Rara	54	0.000	--	61	-0.00	1 / 99999	

**ASTA NUM. 7** NI 186 NF 184 Lungh. 392.6 cm SEZ. 8 Cc D= 0.120 s= 0.0100 m

categoria: p.p. y qy tot.  
 qy medio: 0.25 0.25 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-0.797	0.092	0.055	-0.240	0.252	-0.208	1	0.01	0.00	0.01	
1B	0	-0.797	0.750	0.055	-0.240	0.252	-1.283	1	0.01	0.00	0.04	
1C	0	-0.797	0.092	-0.057	-0.240	-0.263	-0.208	1	0.01	0.00	0.01	
1D	0	-0.797	0.750	-0.057	-0.240	-0.263	-1.283	1	0.01	0.00	0.04	



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1E	0	5.375	0.092	0.055	-0.240	0.252	-0.208	1	0.01	0.01	0.01
1F	0	5.375	0.750	0.055	-0.240	0.252	-1.283	1	0.01	0.01	0.04
1G	0	5.375	0.092	-0.057	-0.240	-0.263	-0.208	1	0.01	0.01	0.01
1H	0	5.375	0.750	-0.057	-0.240	-0.263	-1.283	1	0.01	0.01	0.04
1I	0	0.489	0.246	0.081	-0.553	0.697	-0.474	1	0.02	0.00	0.03
1J	0	0.489	0.595	0.081	-0.553	0.697	-1.017	1	0.02	0.00	0.04
1K	0	0.489	0.246	-0.083	-0.553	-0.708	-0.474	1	0.02	0.00	0.03
1L	0	0.489	0.595	-0.083	-0.553	-0.708	-1.017	1	0.02	0.00	0.04
1M	0	4.089	0.246	0.081	-0.553	0.697	-0.474	1	0.02	0.00	0.03
1N	0	4.089	0.595	0.081	-0.553	0.697	-1.017	1	0.02	0.00	0.04
1O	0	4.089	0.246	-0.083	-0.553	-0.708	-0.474	1	0.02	0.00	0.03
1P	0	4.089	0.595	-0.083	-0.553	-0.708	-1.017	1	0.02	0.00	0.04
2	0	9.577	0.399	-0.002	-0.001	-0.010	-2.696	1	0.00	0.01	0.08
7	0	16.080	0.264	-0.003	-0.001	-0.018	-4.498	1	0.00	0.02	0.14
1A	196	-0.637	-0.405	0.055	-0.240	0.293	-0.547	1	0.01	0.00	0.02
1B	196	-0.637	0.253	0.055	-0.240	0.293	-0.267	1	0.01	0.00	0.01
1C	196	-0.637	-0.405	-0.057	-0.240	-0.299	-0.547	1	0.01	0.00	0.02
1D	196	-0.637	0.253	-0.057	-0.240	-0.299	-0.267	1	0.01	0.00	0.01
1E	196	5.536	-0.405	0.055	-0.240	0.293	-0.547	1	0.01	0.01	0.02
1F	196	5.536	0.253	0.055	-0.240	0.293	-0.267	1	0.01	0.01	0.01
1G	196	5.536	-0.405	-0.057	-0.240	-0.299	-0.547	1	0.01	0.01	0.02
1H	196	5.536	0.253	-0.057	-0.240	-0.299	-0.267	1	0.01	0.01	0.01
1I	196	0.650	-0.251	0.081	-0.553	0.756	-0.488	1	0.02	0.00	0.03
1J	196	0.650	0.098	0.081	-0.553	0.756	-0.326	1	0.02	0.00	0.03
1K	196	0.650	-0.251	-0.083	-0.553	-0.763	-0.488	1	0.02	0.00	0.03
1L	196	0.650	0.098	-0.083	-0.553	-0.763	-0.326	1	0.02	0.00	0.03
1M	196	4.249	-0.251	0.081	-0.553	0.756	-0.488	1	0.02	0.00	0.03
1N	196	4.249	0.098	0.081	-0.553	0.756	-0.326	1	0.02	0.00	0.03
1O	196	4.249	-0.251	-0.083	-0.553	-0.763	-0.488	1	0.02	0.00	0.03
1P	196	4.249	0.098	-0.083	-0.553	-0.763	-0.326	1	0.02	0.00	0.03
2	196	9.786	-0.248	-0.002	-0.001	-0.006	-2.548	1	0.00	0.01	0.08
7	196	16.290	-0.382	-0.003	-0.001	-0.013	-4.614	1	0.00	0.02	0.15
1A	393	-0.476	-0.902	0.055	-0.240	0.334	-1.863	1	0.01	0.00	0.06
1B	393	-0.476	-0.245	0.055	-0.240	0.334	-0.227	1	0.01	0.00	0.01
1C	393	-0.476	-0.902	-0.057	-0.240	-0.336	-1.863	1	0.01	0.00	0.06
1D	393	-0.476	-0.245	-0.057	-0.240	-0.336	-0.227	1	0.01	0.00	0.01
1E	393	5.696	-0.902	0.055	-0.240	0.334	-1.863	1	0.01	0.01	0.06
1F	393	5.696	-0.245	0.055	-0.240	0.334	-0.227	1	0.01	0.01	0.01
1G	393	5.696	-0.902	-0.057	-0.240	-0.336	-1.863	1	0.01	0.01	0.06
1H	393	5.696	-0.245	-0.057	-0.240	-0.336	-0.227	1	0.01	0.01	0.01
1I	393	0.810	-0.748	0.081	-0.553	0.815	-1.478	1	0.02	0.00	0.05
1J	393	0.810	-0.399	0.081	-0.553	0.815	-0.612	1	0.02	0.00	0.03
1K	393	0.810	-0.748	-0.083	-0.553	-0.817	-1.478	1	0.02	0.00	0.05
1L	393	0.810	-0.399	-0.083	-0.553	-0.817	-0.612	1	0.02	0.00	0.03
1M	393	4.410	-0.748	0.081	-0.553	0.815	-1.478	1	0.02	0.00	0.05
1N	393	4.410	-0.399	0.081	-0.553	0.815	-0.612	1	0.02	0.00	0.03
1O	393	4.410	-0.748	-0.083	-0.553	-0.817	-1.478	1	0.02	0.00	0.05
1P	393	4.410	-0.399	-0.083	-0.553	-0.817	-0.612	1	0.02	0.00	0.03
2	393	9.994	-0.894	-0.002	-0.001	-0.002	-3.668	1	0.00	0.01	0.12
7	393	16.500	-1.028	-0.003	-0.001	-0.008	-5.998	1	0.00	0.02	0.19

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x Mmax	Mmax	IR	x fmax.	fmax	fmax / l	Nota
		cm	kN*m		cm			
--	--	194	0.263	0.01	--	--	--	--
--	Rara	194	0.203	--	195	0.02	1 / 21397	
--	Freq.	194	0.203	--	195	0.02	1 / 21397	
--	Q.Perm.	194	0.203	--	195	0.02	1 / 21397	
--	Rara	194	0.203	--	195	0.02	1 / 21397	
--	Freq.	194	0.203	--	195	0.02	1 / 21397	
--	Q.Perm.	194	0.203	--	195	0.02	1 / 21397	
--	Rara	194	0.203	--	195	0.02	1 / 21397	

**ASTA NUM. 6** NI 184 NF 185 Lungh. 77.0 cm SEZ. 8 Cc D= 0.120 s= 0.0100 m

categoria: p.p. y qy tot.  
qy medio: 0.25 0.25 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-1.884	0.891	0.309	-0.279	0.327	-0.612	1	0.01	0.00	0.02	
1B	0	-1.884	4.285	0.309	-0.279	0.327	-3.224	1	0.01	0.00	0.10	
1C	0	-1.884	0.891	-0.309	-0.279	-0.327	-0.612	1	0.01	0.00	0.02	
1D	0	-1.884	4.285	-0.309	-0.279	-0.327	-3.224	1	0.01	0.00	0.10	
1E	0	0.102	0.891	0.309	-0.279	0.327	-0.612	1	0.01	0.00	0.02	
1F	0	0.102	4.285	0.309	-0.279	0.327	-3.224	1	0.01	0.00	0.10	
1G	0	0.102	0.891	-0.309	-0.279	-0.327	-0.612	1	0.01	0.00	0.02	
1H	0	0.102	4.285	-0.309	-0.279	-0.327	-3.224	1	0.01	0.00	0.10	
1I	0	-1.488	1.695	0.779	-0.412	0.702	-1.230	1	0.01	0.00	0.04	
1J	0	-1.488	3.481	0.779	-0.412	0.702	-2.606	1	0.01	0.00	0.08	
1K	0	-1.488	1.695	-0.779	-0.412	-0.702	-1.230	1	0.01	0.00	0.04	
1L	0	-1.488	3.481	-0.779	-0.412	-0.702	-2.606	1	0.01	0.00	0.08	
1M	0	-0.295	1.695	0.779	-0.412	0.702	-1.230	1	0.01	0.00	0.04	
1N	0	-0.295	3.481	0.779	-0.412	0.702	-2.606	1	0.01	0.00	0.08	
1O	0	-0.295	1.695	-0.779	-0.412	-0.702	-1.230	1	0.01	0.00	0.04	
1P	0	-0.295	3.481	-0.779	-0.412	-0.702	-2.606	1	0.01	0.00	0.08	
2	0	-3.496	10.150	0.000	-0.000	0.000	-7.719	1	0.03	0.00	0.24	
7	0	-5.833	16.940	0.000	-0.000	0.000	-12.950	1	0.05	0.01	0.41	
1A	38	-1.851	0.794	0.309	-0.279	0.276	-0.287	1	0.01	0.00	0.01	
1B	38	-1.851	4.188	0.309	-0.279	0.276	-1.594	1	0.01	0.00	0.05	
1C	38	-1.851	0.794	-0.309	-0.279	-0.276	-0.287	1	0.01	0.00	0.01	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1D	38	-1.851	4.188	-0.309	-0.279	-0.276	-1.594	1	0.01	0.00	0.05
1E	38	0.135	0.794	0.309	-0.279	0.276	-0.287	1	0.01	0.00	0.01
1F	38	0.135	4.188	0.309	-0.279	0.276	-1.594	1	0.01	0.00	0.05
1G	38	0.135	0.794	-0.309	-0.279	-0.276	-0.287	1	0.01	0.00	0.01
1H	38	0.135	4.188	-0.309	-0.279	-0.276	-1.594	1	0.01	0.00	0.05
1I	38	-1.454	1.598	0.779	-0.412	0.466	-0.597	1	0.01	0.00	0.02
1J	38	-1.454	3.384	0.779	-0.412	0.466	-1.284	1	0.01	0.00	0.04
1K	38	-1.454	1.598	-0.779	-0.412	-0.466	-0.597	1	0.01	0.00	0.02
1L	38	-1.454	3.384	-0.779	-0.412	-0.466	-1.284	1	0.01	0.00	0.04
1M	38	-0.261	1.598	0.779	-0.412	0.466	-0.597	1	0.01	0.00	0.02
1N	38	-0.261	3.384	0.779	-0.412	0.466	-1.284	1	0.01	0.00	0.04
1O	38	-0.261	1.598	-0.779	-0.412	-0.466	-0.597	1	0.01	0.00	0.02
1P	38	-0.261	3.384	-0.779	-0.412	-0.466	-1.284	1	0.01	0.00	0.04
2	38	-3.453	10.025	0.000	-0.000	0.000	-3.835	1	0.03	0.00	0.12
7	38	-5.790	16.815	0.000	-0.000	0.000	-6.451	1	0.05	0.01	0.20
1A	77	-1.817	0.697	0.309	-0.279	0.224	0.000	1	0.01	0.00	0.01
1B	77	-1.817	4.091	0.309	-0.279	0.224	-0.000	1	0.01	0.00	0.01
1C	77	-1.817	0.697	-0.309	-0.279	-0.224	0.000	1	0.01	0.00	0.01
1D	77	-1.817	4.091	-0.309	-0.279	-0.224	-0.000	1	0.01	0.00	0.01
1E	77	0.168	0.697	0.309	-0.279	0.224	0.000	1	0.01	0.00	0.01
1F	77	0.168	4.091	0.309	-0.279	0.224	-0.000	1	0.01	0.00	0.01
1G	77	0.168	0.697	-0.309	-0.279	-0.224	0.000	1	0.01	0.00	0.01
1H	77	0.168	4.091	-0.309	-0.279	-0.224	-0.000	1	0.01	0.00	0.01
1I	77	-1.421	1.501	0.779	-0.412	0.229	0.000	1	0.01	0.00	0.01
1J	77	-1.421	3.287	0.779	-0.412	0.229	-0.000	1	0.01	0.00	0.01
1K	77	-1.421	1.501	-0.779	-0.412	-0.229	0.000	1	0.01	0.00	0.01
1L	77	-1.421	3.287	-0.779	-0.412	-0.229	-0.000	1	0.01	0.00	0.01
1M	77	-0.228	1.501	0.779	-0.412	0.229	0.000	1	0.01	0.00	0.01
1N	77	-0.228	3.287	0.779	-0.412	0.229	-0.000	1	0.01	0.00	0.01
1O	77	-0.228	1.501	-0.779	-0.412	-0.229	0.000	1	0.01	0.00	0.01
1P	77	-0.228	3.287	-0.779	-0.412	-0.229	-0.000	1	0.01	0.00	0.01
2	77	-3.409	9.900	0.000	-0.000	0.000	0.000	1	0.03	0.00	0.00
7	77	-5.747	16.690	0.000	-0.000	0.000	0.000	1	0.05	0.01	0.00

### MOMENTO MASSIMO E FRECCIA IN CAMPATA

NC	Tipo	x	Mmax	Mmax	IR	x	fmax.	fmax	fmax / l	Nota
		cm	kN*m			cm				
--	--	77	0.000	0.000	0.00	--	--	--	--	--
--	Rara	77	0.000	0.000	--	34	-0.00	1 / 99999		
--	Freq.	77	0.000	0.000	--	34	-0.00	1 / 99999		
--	Q.Perm.	77	0.000	0.000	--	34	-0.00	1 / 99999		
--	Rara	77	0.000	0.000	--	34	-0.00	1 / 99999		
--	Freq.	77	0.000	0.000	--	34	-0.00	1 / 99999		
--	Q.Perm.	77	0.000	0.000	--	34	-0.00	1 / 99999		
--	Rara	77	0.000	0.000	--	34	-0.00	1 / 99999		

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-1.884	0.344	-3.699	1	0.2938	1.0158	0.9939	--	--	0.01	--	0.13	Snell. 'zx'= 148
1B	-1.884	0.344	-3.224	1	0.2938	1.0158	0.9939	--	--	0.01	--	0.12	Snell. 'zx'= 148
1C	-1.884	-0.344	-3.699	1	0.2938	1.0158	0.9939	--	--	0.01	--	0.13	Snell. 'zx'= 148
1D	-1.884	-0.344	-3.224	1	0.2938	1.0158	0.9939	--	--	0.01	--	0.12	Snell. 'zx'= 148
1E	5.696	0.344	-3.699	1	0.2938	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 148
1F	5.696	0.344	-3.224	1	0.2938	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 148
1G	5.696	-0.344	-3.699	1	0.2938	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 148
1H	5.696	-0.344	-3.224	1	0.2938	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 148
1I	-1.488	0.815	-3.169	1	0.2938	1.0106	0.9952	--	--	0.01	--	0.13	Snell. 'zx'= 148
1J	-1.488	0.815	-2.606	1	0.2938	1.0106	0.9952	--	--	0.01	--	0.11	Snell. 'zx'= 148
1K	-1.488	-0.817	-3.169	1	0.2938	1.0106	0.9952	--	--	0.01	--	0.13	Snell. 'zx'= 148
1L	-1.488	-0.817	-2.606	1	0.2938	1.0106	0.9952	--	--	0.01	--	0.11	Snell. 'zx'= 148
1M	-0.295	0.815	-3.169	1	0.2938	1.0021	0.9991	--	--	0.00	--	0.13	Snell. 'zx'= 148
1N	-0.295	0.815	-2.606	1	0.2938	1.0021	0.9991	--	--	0.00	--	0.11	Snell. 'zx'= 148
1O	-0.295	-0.817	-3.169	1	0.2938	1.0021	0.9991	--	--	0.00	--	0.13	Snell. 'zx'= 148
1P	-0.295	-0.817	-2.606	1	0.2938	1.0021	0.9991	--	--	0.00	--	0.11	Snell. 'zx'= 148
2	-3.496	-0.010	-10.880	1	0.2938	0.9887	0.9887	--	--	0.01	--	0.35	Snell. 'zx'= 148
7	-5.833	-0.018	-18.210	1	0.2938	0.9812	1.0423	--	--	0.02	--	0.62	Snell. 'zx'= 148

Lavoro: **Scala rev** Intestazione lavoro: **Scala**  
 Elemento: **TRAVE** Metodo di verifica: **Eurocodice 3 - NTC 2018**  
 Gruppo: **3** Descrizione: **pendini**  
 Tabella: **Tabella pilastri**  
 Tipo acciaio: **S 275** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**  
 Coeff. k: **1.000** Coeff. kw: **1.000** Carico all'estradosso della trave  
 Tipologia sismica yx: **Senza prescrizioni aggiuntive**  
 Tipologia sismica zx: **Senza prescrizioni aggiuntive**  
 $\gamma_{M0}$ : **1.050**  $\gamma_{M1}$ : **1.050**  $\gamma_{M1}$ : **1.050**  $\gamma_{M2}$ : **1.250**  $\gamma_{rv}$ : **0.000**  $\gamma_{M0}$  Pf: **1.000**  $\gamma_{M1}$  Pf: **1.000**  
 Tipo collegamento: **saldato** Connessione su un solo lato Connessione sul lato corto (solo 'L')

**ASTA NUM. 1** NI 127 NF 30 Lungh. 315.5 cm SEZ. 3 Cp D= 0.036 m  
 Sollecitazioni di calcolo e di verifica Indici <= 1 : **VERIFICATO**

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
----	---	----	----	----	----	----	----	--------	--------	--------	------	------

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

	cm	kN			kN*m						
1A	0	30.698	-0.000	0.000	0.000	0.000	0.000	1	0.00	0.12	0.12
1B	0	30.698	0.000	0.000	0.000	0.000	0.000	1	0.00	0.12	0.12
1C	0	30.698	-0.000	-0.000	0.000	0.000	0.000	1	0.00	0.12	0.12
1D	0	30.698	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.12	0.12
1E	0	48.042	-0.000	0.000	0.000	0.000	0.000	1	0.00	0.18	0.18
1F	0	48.042	0.000	0.000	0.000	0.000	0.000	1	0.00	0.18	0.18
1G	0	48.042	-0.000	-0.000	0.000	0.000	0.000	1	0.00	0.18	0.18
1H	0	48.042	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.18	0.18
1I	0	33.141	-0.000	0.000	0.000	0.000	0.000	1	0.00	0.12	0.12
1J	0	33.141	0.000	0.000	0.000	0.000	0.000	1	0.00	0.12	0.12
1K	0	33.141	-0.000	-0.000	0.000	0.000	0.000	1	0.00	0.12	0.12
1L	0	33.141	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.12	0.12
1M	0	45.599	-0.000	0.000	0.000	0.000	0.000	1	0.00	0.17	0.17
1N	0	45.599	0.000	0.000	0.000	0.000	0.000	1	0.00	0.17	0.17
1O	0	45.599	-0.000	-0.000	0.000	0.000	0.000	1	0.00	0.17	0.17
1P	0	45.599	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.17	0.17
2	0	62.980	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.24	0.24
7	0	44.540	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.17	0.17
1A	158	30.823	-0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.12	0.12
1B	158	30.823	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.12	0.12
1C	158	30.823	-0.000	-0.000	0.000	-0.000	-0.000	1	0.00	0.12	0.12
1D	158	30.823	0.000	-0.000	0.000	-0.000	0.000	1	0.00	0.12	0.12
1E	158	48.167	-0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.18	0.18
1F	158	48.167	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.18	0.18
1G	158	48.167	-0.000	-0.000	0.000	-0.000	-0.000	1	0.00	0.18	0.18
1H	158	48.167	0.000	-0.000	0.000	-0.000	0.000	1	0.00	0.18	0.18
1I	158	33.266	-0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.12	0.12
1J	158	33.266	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.12	0.12
1K	158	33.266	-0.000	-0.000	0.000	-0.000	-0.000	1	0.00	0.12	0.12
1L	158	33.266	0.000	-0.000	0.000	-0.000	0.000	1	0.00	0.12	0.12
1M	158	45.724	-0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.17	0.17
1N	158	45.724	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.17	0.17
1O	158	45.724	-0.000	-0.000	0.000	-0.000	-0.000	1	0.00	0.17	0.17
1P	158	45.724	0.000	-0.000	0.000	-0.000	0.000	1	0.00	0.17	0.17
2	158	63.140	0.000	-0.000	0.000	-0.000	0.000	1	0.00	0.24	0.24
7	158	44.705	0.000	-0.000	0.000	-0.000	0.000	1	0.00	0.17	0.17
1A	315	30.948	-0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.12	0.12
1B	315	30.948	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.12	0.12
1C	315	30.948	-0.000	-0.000	0.000	0.000	-0.000	1	0.00	0.12	0.12
1D	315	30.948	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.12	0.12
1E	315	48.292	-0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.18	0.18
1F	315	48.292	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.18	0.18
1G	315	48.292	-0.000	-0.000	0.000	0.000	-0.000	1	0.00	0.18	0.18
1H	315	48.292	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.18	0.18
1I	315	33.391	-0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.13	0.13
1J	315	33.391	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.13	0.13
1K	315	33.391	-0.000	-0.000	0.000	0.000	-0.000	1	0.00	0.13	0.13
1L	315	33.391	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.13	0.13
1M	315	45.849	-0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.17	0.17
1N	315	45.849	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.17	0.17
1O	315	45.849	-0.000	-0.000	0.000	0.000	-0.000	1	0.00	0.17	0.17
1P	315	45.849	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.17	0.17
2	315	63.300	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.24	0.24
7	315	44.870	0.000	-0.000	0.000	0.000	0.000	1	0.00	0.17	0.17

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	30.948	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1B	30.948	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1C	30.948	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1D	30.948	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1E	48.292	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1F	48.292	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1G	48.292	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1H	48.292	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1I	33.391	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1J	33.391	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1K	33.391	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1L	33.391	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1M	45.849	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1N	45.849	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1O	45.849	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1P	45.849	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
2	63.300	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
7	44.870	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0

**ASTA NUM. 2** NI 176 NF 186 Lunghezza 527.8 cm SEZ. 3 Cp D= 0.036 m

categoria: p.p. y qy tot.  
qy medio: -0.00 -0.00 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	31.655	-0.004	0.000	0.000	0.000	0.000	1	0.00	0.12	0.12	
1B	0	31.655	-0.004	0.000	0.000	0.000	-0.000	1	0.00	0.12	0.12	
1C	0	31.655	-0.004	-0.000	0.000	-0.000	0.000	1	0.00	0.12	0.12	
1D	0	31.655	-0.004	-0.000	0.000	-0.000	-0.000	1	0.00	0.12	0.12	



## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

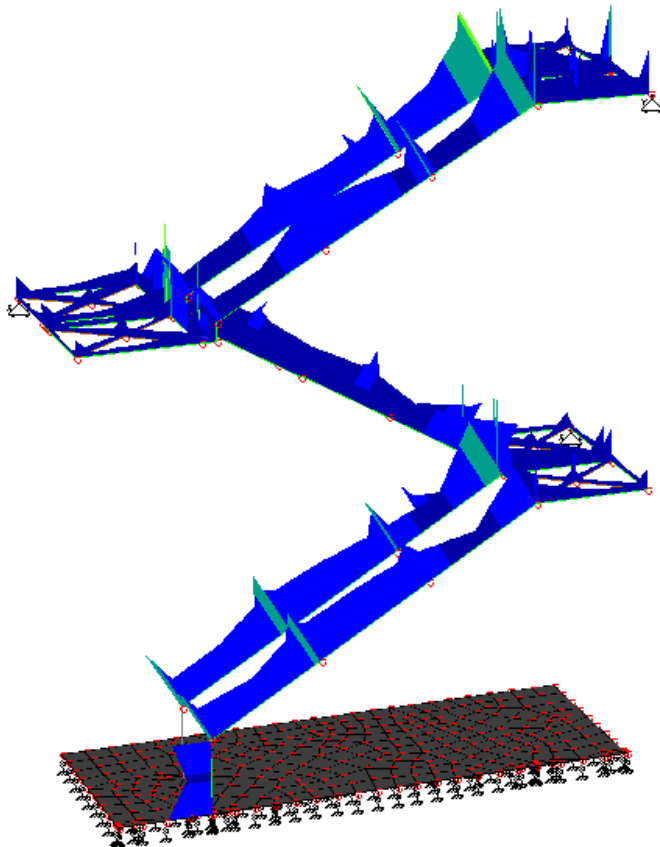
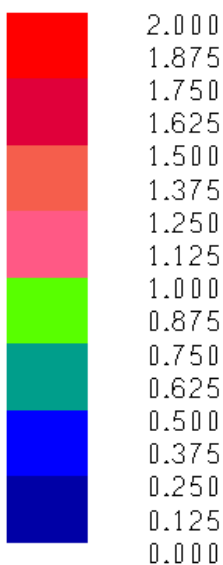
1P	0	17.593	0.000	0.000	0.000	0.000	0.000	1	0.00	0.07	0.07
2	0	14.610	0.000	0.000	0.000	0.000	0.000	1	0.00	0.05	0.05
7	0	6.868	0.000	0.000	0.000	0.000	0.000	1	0.00	0.03	0.03
1A	187	8.209	0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.03	0.03
1B	187	8.209	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.03	0.03
1C	187	8.209	0.000	0.000	0.000	0.000	-0.000	1	0.00	0.03	0.03
1D	187	8.209	0.000	0.000	0.000	0.000	0.000	1	0.00	0.03	0.03
1E	187	18.111	0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.07	0.07
1F	187	18.111	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.07	0.07
1G	187	18.111	0.000	0.000	0.000	0.000	-0.000	1	0.00	0.07	0.07
1H	187	18.111	0.000	0.000	0.000	0.000	0.000	1	0.00	0.07	0.07
1I	187	8.577	0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.03	0.03
1J	187	8.577	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.03	0.03
1K	187	8.577	0.000	0.000	0.000	0.000	-0.000	1	0.00	0.03	0.03
1L	187	8.577	0.000	0.000	0.000	0.000	0.000	1	0.00	0.03	0.03
1M	187	17.743	0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.07	0.07
1N	187	17.743	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.07	0.07
1O	187	17.743	0.000	0.000	0.000	0.000	-0.000	1	0.00	0.07	0.07
1P	187	17.743	0.000	0.000	0.000	0.000	0.000	1	0.00	0.07	0.07
2	187	14.800	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.06	0.06
7	187	7.059	0.000	0.000	0.000	0.000	0.000	1	0.00	0.03	0.03
1A	374	8.359	0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.03	0.03
1B	374	8.359	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.03	0.03
1C	374	8.359	0.000	0.000	0.000	0.000	-0.000	1	0.00	0.03	0.03
1D	374	8.359	0.000	0.000	0.000	0.000	0.000	1	0.00	0.03	0.03
1E	374	18.261	0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.07	0.07
1F	374	18.261	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.07	0.07
1G	374	18.261	0.000	0.000	0.000	0.000	-0.000	1	0.00	0.07	0.07
1H	374	18.261	0.000	0.000	0.000	0.000	0.000	1	0.00	0.07	0.07
1I	374	8.727	0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.03	0.03
1J	374	8.727	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.03	0.03
1K	374	8.727	0.000	0.000	0.000	0.000	-0.000	1	0.00	0.03	0.03
1L	374	8.727	0.000	0.000	0.000	0.000	0.000	1	0.00	0.03	0.03
1M	374	17.893	0.000	0.000	0.000	-0.000	-0.000	1	0.00	0.07	0.07
1N	374	17.893	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.07	0.07
1O	374	17.893	0.000	0.000	0.000	0.000	-0.000	1	0.00	0.07	0.07
1P	374	17.893	0.000	0.000	0.000	0.000	0.000	1	0.00	0.07	0.07
2	374	14.990	0.000	0.000	0.000	-0.000	0.000	1	0.00	0.06	0.06
7	374	7.249	0.000	0.000	0.000	0.000	0.000	1	0.00	0.03	0.03

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	8.359	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1B	8.359	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1C	8.359	0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1D	8.359	0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1E	18.261	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1F	18.261	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1G	18.261	0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1H	18.261	0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1I	8.727	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1J	8.727	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1K	8.727	0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1L	8.727	0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1M	17.893	-0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1N	17.893	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1O	17.893	0.000	-0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1P	17.893	0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
2	14.990	-0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
7	7.249	0.000	0.000	1	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0

## 2.2.2.2 COSCIALI

Inviluppi



Lavoro: **Scala rev** Intestazione lavoro: **Scala**  
 Elemento: **TRAVE** Metodo di verifica: **Eurocodice 3 - NTC 2018**  
 Gruppo: **1** Descrizione: **cosciali**  
 Tabella: **Tabella travi**  
 Tipo acciaio: **S 275** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**  
 Coeff. k: **1.000** Coeff. kw: **1.000** Carico all'estradosso della trave  
 Tipologia sismica: **Senza prescrizioni aggiuntive**  
 $\gamma_{M0}$ : **1.050**  $\gamma_{M1}$ : **1.050**  $\gamma_{M1}'$ : **1.050**  $\gamma_{M2}$ : **1.250**  $\gamma_{rv}$ : **0.000**  $\gamma_{M0}$  Pf: **1.000**  $\gamma_{M1}$  Pf: **1.000**  
 Tipo collegamento: **saldato** Connessione su un solo lato Connessione sul lato corto (solo 'L')

**ASTA NUM. 1** NI 2 NF 24 Lungh. 109.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.22 0.13 4.00 4.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-3.158	2.260	0.285	0.000	0.163	-1.504	1	0.01	0.00	0.05	
1B	0	-3.158	4.128	0.285	0.000	0.163	-3.458	1	0.01	0.00	0.10	
1C	0	-3.158	2.260	-0.163	0.000	-0.144	-1.504	4	0.01	0.01	0.10	
1D	0	-3.158	4.128	-0.163	0.000	-0.144	-3.458	4	0.01	0.01	0.18	
1E	0	2.231	2.260	0.285	0.000	0.163	-1.504	1	0.01	0.00	0.05	
1F	0	2.231	4.128	0.285	0.000	0.163	-3.458	1	0.01	0.00	0.10	













Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1L	17	-7.991	3.622	-2.292	0.000	0.010	-1.897	4	0.02	0.01	0.10
1M	17	-2.205	-6.120	1.809	0.000	-0.083	-1.095	4	0.02	0.00	0.07
1N	17	-2.205	3.622	1.809	0.000	-0.083	-1.897	4	0.01	0.00	0.10
1O	17	-2.205	-6.120	-2.292	0.000	0.010	-1.095	4	0.02	0.00	0.05
1P	17	-2.205	3.622	-2.292	0.000	0.010	-1.897	4	0.02	0.00	0.08
2	17	-9.810	-2.901	-0.449	0.000	-0.066	-2.772	4	0.01	0.02	0.16
7	17	-6.701	2.844	-0.965	0.000	-0.159	-2.971	4	0.01	0.01	0.17

Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx kN	My kN*m	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
1A	-7.170	0.070	-0.887	4	0.8117	0.9921	1.0058	--	--	0.02	--	0.07	Snell.imin= 9
1B	-7.170	0.070	-2.318	4	0.8117	0.9921	1.0122	--	--	0.02	--	0.13	Snell.imin= 9
1C	-7.170	-0.224	-0.887	4	0.8117	1.0034	1.0058	--	--	0.02	--	0.10	Snell.imin= 9
1D	-7.170	-0.224	-2.318	4	0.8117	1.0034	1.0122	--	--	0.02	--	0.16	Snell.imin= 9
1E	-3.100	0.070	-0.887	4	0.8117	0.9966	1.0025	--	--	0.01	--	0.06	Snell.imin= 9
1F	-3.100	0.070	-2.318	4	0.8117	0.9966	1.0053	--	--	0.01	--	0.12	Snell.imin= 9
1G	-3.100	-0.224	-0.887	4	0.8117	1.0015	1.0025	--	--	0.01	--	0.09	Snell.imin= 9
1H	-3.100	-0.224	-2.318	4	0.8117	1.0015	1.0053	--	--	0.01	--	0.15	Snell.imin= 9
1I	-8.028	0.235	-1.095	4	0.8117	0.9992	1.0060	--	--	0.02	--	0.11	Snell.imin= 9
1J	-8.028	0.235	-2.304	4	0.8117	0.9992	1.0127	--	--	0.02	--	0.16	Snell.imin= 9
1K	-8.028	-0.390	-1.095	4	0.8117	1.0033	1.0060	--	--	0.02	--	0.14	Snell.imin= 9
1L	-8.028	-0.390	-2.304	4	0.8117	1.0033	1.0127	--	--	0.02	--	0.20	Snell.imin= 9
1M	-2.242	0.235	-1.095	4	0.8117	0.9998	1.0017	--	--	0.00	--	0.09	Snell.imin= 9
1N	-2.242	0.235	-2.304	4	0.8117	0.9998	1.0035	--	--	0.00	--	0.14	Snell.imin= 9
1O	-2.242	-0.390	-1.095	4	0.8117	1.0009	1.0017	--	--	0.00	--	0.12	Snell.imin= 9
1P	-2.242	-0.390	-2.304	4	0.8117	1.0009	1.0035	--	--	0.00	--	0.17	Snell.imin= 9
2	-9.858	-0.142	-2.772	4	0.8117	1.0115	1.0156	--	--	0.02	--	0.18	Snell.imin= 9
7	-6.749	-0.323	-3.455	4	0.8117	1.0082	1.0110	--	--	0.01	--	0.23	Snell.imin= 9

ASTA NUM. 7 NI 80 NF 79 Lungh. 15.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.22 1.13 4.00 5.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x cm	Fx kN	Fy kN	Fz	Mx kN*m	My kN*m	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
1A	0	-5.421	3.473	0.759	0.000	0.016	-1.274	4	0.01	0.01	0.07	
1B	0	-5.421	7.561	0.759	0.000	0.016	-2.892	4	0.03	0.01	0.13	
1C	0	-5.421	3.473	-1.242	0.000	-0.286	-1.274	4	0.01	0.01	0.12	
1D	0	-5.421	7.561	-1.242	0.000	-0.286	-2.892	4	0.03	0.01	0.19	
1E	0	2.923	3.473	0.759	0.000	0.016	-1.274	1	0.01	0.01	0.03	
1F	0	2.923	7.561	0.759	0.000	0.016	-2.892	1	0.03	0.01	0.07	
1G	0	2.923	3.473	-1.242	0.000	-0.286	-1.274	4	0.01	0.01	0.11	
1H	0	2.923	7.561	-1.242	0.000	-0.286	-2.892	4	0.03	0.01	0.17	
1I	0	-6.101	2.604	1.843	0.000	0.184	-1.410	3	0.01	0.01	0.10	
1J	0	-6.101	8.430	1.843	0.000	0.184	-2.756	1	0.03	0.01	0.09	
1K	0	-6.101	2.604	-2.326	0.000	-0.454	-1.410	4	0.02	0.01	0.16	
1L	0	-6.101	8.430	-2.326	0.000	-0.454	-2.756	4	0.03	0.01	0.21	
1M	0	3.603	2.604	1.843	0.000	0.184	-1.410	1	0.01	0.01	0.05	
1N	0	3.603	8.430	1.843	0.000	0.184	-2.756	1	0.03	0.01	0.08	
1O	0	3.603	2.604	-2.326	0.000	-0.454	-1.410	4	0.02	0.01	0.14	
1P	0	3.603	8.430	-2.326	0.000	-0.454	-2.756	4	0.03	0.01	0.20	
2	0	-2.901	10.570	-0.449	0.000	-0.249	-3.811	4	0.03	0.00	0.21	
7	0	2.844	7.461	-0.965	0.000	-0.545	-4.520	4	0.02	0.01	0.29	
1A	8	-5.421	3.282	0.759	0.000	-0.018	-0.755	4	0.01	0.01	0.05	
1B	8	-5.421	7.370	0.759	0.000	-0.018	-2.598	4	0.02	0.01	0.13	
1C	8	-5.421	3.282	-1.242	0.000	-0.216	-0.755	4	0.01	0.01	0.09	
1D	8	-5.421	7.370	-1.242	0.000	-0.216	-2.598	4	0.02	0.01	0.16	
1E	8	2.923	3.282	0.759	0.000	-0.018	-0.755	3	0.01	0.01	0.04	
1F	8	2.923	7.370	0.759	0.000	-0.018	-2.598	1	0.02	0.01	0.07	
1G	8	2.923	3.282	-1.242	0.000	-0.216	-0.755	4	0.01	0.01	0.07	
1H	8	2.923	7.370	-1.242	0.000	-0.216	-2.598	4	0.02	0.01	0.15	
1I	8	-6.101	2.413	1.843	0.000	0.071	-0.830	3	0.01	0.01	0.06	
1J	8	-6.101	8.239	1.843	0.000	0.071	-2.523	1	0.03	0.01	0.07	
1K	8	-6.101	2.413	-2.326	0.000	-0.305	-0.830	4	0.02	0.01	0.11	
1L	8	-6.101	8.239	-2.326	0.000	-0.305	-2.523	4	0.03	0.01	0.18	
1M	8	3.603	2.413	1.843	0.000	0.071	-0.830	3	0.01	0.01	0.05	
1N	8	3.603	8.239	1.843	0.000	0.071	-2.523	1	0.03	0.01	0.07	
1O	8	3.603	2.413	-2.326	0.000	-0.305	-0.830	4	0.02	0.01	0.09	
1P	8	3.603	8.239	-2.326	0.000	-0.305	-2.523	4	0.03	0.01	0.16	
2	8	-2.901	10.214	-0.449	0.000	-0.215	-3.032	4	0.03	0.00	0.17	
7	8	2.844	7.105	-0.965	0.000	-0.473	-3.974	4	0.02	0.01	0.25	
1A	15	-5.421	3.091	0.759	0.000	-0.051	-0.250	4	0.01	0.01	0.04	
1B	15	-5.421	7.179	0.759	0.000	-0.051	-2.318	4	0.02	0.01	0.12	
1C	15	-5.421	3.091	-1.242	0.000	-0.147	-0.250	4	0.01	0.01	0.05	
1D	15	-5.421	7.179	-1.242	0.000	-0.147	-2.318	4	0.02	0.01	0.14	
1E	15	2.923	3.091	0.759	0.000	-0.051	-0.250	4	0.01	0.01	0.02	
1F	15	2.923	7.179	0.759	0.000	-0.051	-2.318	4	0.02	0.01	0.11	
1G	15	2.923	3.091	-1.242	0.000	-0.147	-0.250	4	0.01	0.01	0.04	
1H	15	2.923	7.179	-1.242	0.000	-0.147	-2.318	4	0.02	0.01	0.13	
1I	15	-6.101	2.222	1.843	0.000	-0.042	-0.264	4	0.01	0.01	0.04	
1J	15	-6.101	8.048	1.843	0.000	-0.042	-2.304	4	0.03	0.01	0.12	
1K	15	-6.101	2.222	-2.326	0.000	-0.156	-0.264	4	0.02	0.01	0.06	
1L	15	-6.101	8.048	-2.326	0.000	-0.156	-2.304	4	0.03	0.01	0.14	
1M	15	3.603	2.222	1.843	0.000	-0.042	-0.264	4	0.01	0.01	0.02	
1N	15	3.603	8.048	1.843	0.000	-0.042	-2.304	4	0.03	0.01	0.11	
1O	15	3.603	2.222	-2.326	0.000	-0.156	-0.264	4	0.02	0.01	0.04	
1P	15	3.603	8.048	-2.326	0.000	-0.156	-2.304	4	0.03	0.01	0.13	
2	15	-2.901	9.858	-0.449	0.000	-0.181	-2.279	4	0.03	0.00	0.14	
7	15	2.844	6.749	-0.965	0.000	-0.400	-3.455	4	0.02	0.01	0.22	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-5.421	-0.051	-1.274	4	0.8120	0.9999	1.0030	--	--	0.01	--	0.07	Snell.imin= 8
1B	-5.421	-0.051	-2.892	4	0.8120	0.9999	1.0066	--	--	0.01	--	0.14	Snell.imin= 8
1C	-5.421	-0.286	-1.274	4	0.8120	1.0053	1.0030	--	--	0.01	--	0.11	Snell.imin= 8
1D	-5.421	-0.286	-2.892	4	0.8120	1.0053	1.0066	--	--	0.01	--	0.18	Snell.imin= 8
1E	2.923	-0.051	-1.274	4	0.8120	0.0000	0.0000	--	--	--	--	--	Snell.imin= 8
1F	2.923	-0.051	-2.892	4	0.8120	0.0000	0.0000	--	--	--	--	--	Snell.imin= 8
1G	2.923	-0.286	-1.274	4	0.8120	0.0000	0.0000	--	--	--	--	--	Snell.imin= 8
1H	2.923	-0.286	-2.892	4	0.8120	0.0000	0.0000	--	--	--	--	--	Snell.imin= 8
1I	-6.101	0.184	-1.410	4	0.8120	1.0004	1.0033	--	--	0.01	--	0.10	Snell.imin= 8
1J	-6.101	0.184	-2.756	4	0.8120	1.0004	1.0077	--	--	0.01	--	0.16	Snell.imin= 8
1K	-6.101	-0.454	-1.410	4	0.8120	1.0047	1.0033	--	--	0.01	--	0.15	Snell.imin= 8
1L	-6.101	-0.454	-2.756	4	0.8120	1.0047	1.0077	--	--	0.01	--	0.21	Snell.imin= 8
1M	3.603	0.184	-1.410	4	0.8120	0.0000	0.0000	--	--	--	--	--	Snell.imin= 8
1N	3.603	0.184	-2.756	4	0.8120	0.0000	0.0000	--	--	--	--	--	Snell.imin= 8
1O	3.603	-0.454	-1.410	4	0.8120	0.0000	0.0000	--	--	--	--	--	Snell.imin= 8
1P	3.603	-0.454	-2.756	4	0.8120	0.0000	0.0000	--	--	--	--	--	Snell.imin= 8
2	-2.901	-0.249	-3.811	4	0.8120	1.0036	1.0029	--	--	0.00	--	0.21	Snell.imin= 8
7	2.844	-0.545	-4.520	4	0.8120	0.0000	0.0000	--	--	--	--	--	Snell.imin= 8

ASTA NUM. 8 NI 84 NF 104 Lungh. 109.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.22 0.13 4.00 4.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-8.575	5.235	0.433	0.000	0.303	-4.490	1	0.02	0.01	0.14	
1B	0	-8.575	6.771	0.433	0.000	0.303	-6.092	1	0.02	0.01	0.18	
1C	0	-8.575	5.235	-0.094	0.000	-0.070	-4.490	4	0.02	0.01	0.23	
1D	0	-8.575	6.771	-0.094	0.000	-0.070	-6.092	4	0.02	0.01	0.29	
1E	0	1.427	5.235	0.433	0.000	0.303	-4.490	1	0.02	0.00	0.13	
1F	0	1.427	6.771	0.433	0.000	0.303	-6.092	1	0.02	0.00	0.17	
1G	0	1.427	5.235	-0.094	0.000	-0.070	-4.490	4	0.02	0.00	0.20	
1H	0	1.427	6.771	-0.094	0.000	-0.070	-6.092	4	0.02	0.00	0.27	
1I	0	-10.385	5.329	0.773	0.000	0.550	-4.602	1	0.02	0.01	0.16	
1J	0	-10.385	6.677	0.773	0.000	0.550	-5.980	1	0.02	0.01	0.19	
1K	0	-10.385	5.329	-0.434	0.000	-0.318	-4.602	4	0.02	0.02	0.28	
1L	0	-10.385	6.677	-0.434	0.000	-0.318	-5.980	4	0.02	0.02	0.34	
1M	0	3.237	5.329	0.773	0.000	0.550	-4.602	1	0.02	0.01	0.15	
1N	0	3.237	6.677	0.773	0.000	0.550	-5.980	1	0.02	0.01	0.18	
1O	0	3.237	5.329	-0.434	0.000	-0.318	-4.602	4	0.02	0.01	0.25	
1P	0	3.237	6.677	-0.434	0.000	-0.318	-5.980	4	0.02	0.01	0.31	
2	0	-4.158	11.820	0.225	0.000	0.161	-10.210	1	0.04	0.01	0.26	
7	0	-9.504	9.826	0.741	0.000	0.526	-8.241	1	0.03	0.01	0.24	
1A	55	-8.575	4.395	0.433	0.000	0.066	-1.890	3	0.01	0.01	0.10	
1B	55	-8.575	5.930	0.433	0.000	0.066	-2.607	3	0.02	0.01	0.13	
1C	55	-8.575	4.395	-0.094	0.000	-0.019	-1.890	4	0.01	0.01	0.11	
1D	55	-8.575	5.930	-0.094	0.000	-0.019	-2.607	4	0.02	0.01	0.14	
1E	55	1.427	4.395	0.433	0.000	0.066	-1.890	1	0.01	0.00	0.05	
1F	55	1.427	5.930	0.433	0.000	0.066	-2.607	1	0.02	0.00	0.07	
1G	55	1.427	4.395	-0.094	0.000	-0.019	-1.890	4	0.01	0.00	0.08	
1H	55	1.427	5.930	-0.094	0.000	-0.019	-2.607	4	0.02	0.00	0.11	
1I	55	-10.385	4.489	0.773	0.000	0.129	-1.947	3	0.01	0.01	0.12	
1J	55	-10.385	5.836	0.773	0.000	0.129	-2.550	3	0.02	0.01	0.14	
1K	55	-10.385	4.489	-0.434	0.000	-0.081	-1.947	4	0.01	0.02	0.13	
1L	55	-10.385	5.836	-0.434	0.000	-0.081	-2.550	4	0.02	0.02	0.15	
1M	55	3.237	4.489	0.773	0.000	0.129	-1.947	1	0.01	0.01	0.06	
1N	55	3.237	5.836	0.773	0.000	0.129	-2.550	1	0.02	0.01	0.07	
1O	55	3.237	4.489	-0.434	0.000	-0.081	-1.947	4	0.01	0.01	0.10	
1P	55	3.237	5.836	-0.434	0.000	-0.081	-2.550	4	0.02	0.01	0.12	
2	55	-4.158	9.945	0.225	0.000	0.038	-4.276	1	0.03	0.01	0.11	
7	55	-9.504	7.949	0.741	0.000	0.122	-3.397	1	0.03	0.01	0.10	
1A	109	-8.575	3.554	0.433	0.000	-0.170	0.251	4	0.01	0.01	0.05	
1B	109	-8.575	5.090	0.433	0.000	-0.170	0.421	4	0.02	0.01	0.06	
1C	109	-8.575	3.554	-0.094	0.000	0.033	0.251	4	0.01	0.01	0.02	
1D	109	-8.575	5.090	-0.094	0.000	0.033	0.421	4	0.02	0.01	0.03	
1E	109	1.427	3.554	0.433	0.000	-0.170	0.251	4	0.01	0.00	0.05	
1F	109	1.427	5.090	0.433	0.000	-0.170	0.421	4	0.02	0.00	0.06	
1G	109	1.427	3.554	-0.094	0.000	0.033	0.251	1	0.01	0.00	0.01	
1H	109	1.427	5.090	-0.094	0.000	0.033	0.421	1	0.02	0.00	0.01	
1I	109	-10.385	3.648	0.773	0.000	-0.293	0.250	4	0.01	0.02	0.08	
1J	109	-10.385	4.996	0.773	0.000	-0.293	0.422	4	0.02	0.02	0.08	
1K	109	-10.385	3.648	-0.434	0.000	0.156	0.250	4	0.01	0.02	0.03	
1L	109	-10.385	4.996	-0.434	0.000	0.156	0.422	4	0.02	0.02	0.03	
1M	109	3.237	3.648	0.773	0.000	-0.293	0.250	4	0.01	0.01	0.07	
1N	109	3.237	4.996	0.773	0.000	-0.293	0.422	4	0.02	0.01	0.08	
1O	109	3.237	3.648	-0.434	0.000	0.156	0.250	4	0.01	0.01	0.03	
1P	109	3.237	4.996	-0.434	0.000	0.156	0.422	4	0.02	0.01	0.04	
2	109	-4.158	8.069	0.225	0.000	-0.085	0.635	4	0.03	0.01	0.06	
7	109	-9.504	6.071	0.741	0.000	-0.282	0.423	4	0.02	0.02	0.08	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Table with columns 1A-1N, 1P, 2, 7 and values for various parameters like -8.575, 0.303, -4.490, etc.

ASTA NUM. 9 NI 82 NF 83 Lungh. 17.0 cm SEZ. 1 Ps L 200X 90X 10
Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

Main table with columns NC, x, Fx, Fy, Fz, Mx, My, Mz, Classe, I.V.T., I.R.n., I.R., Nota. Contains multiple rows of structural data for different parts (1A-1N, 1P, 2, 7).

Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

Table with columns NC, Fx, My, Mz, Classe, gamma\_min, ky, kz, kLT, gamma\_LT, I.S.n., I.S.m., I.S., Nota. Contains structural stability verification data.



Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

ASTA NUM. 11 NI 150 NF 152 Lunghezza 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.19 0.97 1.72 2.87 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-6.489	2.868	0.567	0.000	0.475	-0.855	3	0.01	0.01	0.13	
1B	0	-6.489	4.714	0.567	0.000	0.475	-1.937	3	0.02	0.01	0.17	
1C	0	-6.489	2.868	-1.212	0.000	-1.243	-0.855	4	0.01	0.01	0.28	
1D	0	-6.489	4.714	-1.212	0.000	-1.243	-1.937	4	0.02	0.01	0.32	
1E	0	2.023	2.868	0.567	0.000	0.475	-0.855	1	0.01	0.00	0.06	
1F	0	2.023	4.714	0.567	0.000	0.475	-1.937	1	0.02	0.00	0.08	
1G	0	2.023	2.868	-1.212	0.000	-1.243	-0.855	4	0.01	0.00	0.26	
1H	0	2.023	4.714	-1.212	0.000	-1.243	-1.937	4	0.02	0.00	0.30	
1I	0	-8.304	3.224	0.885	0.000	0.739	-0.904	3	0.01	0.01	0.18	
1J	0	-8.304	4.358	0.885	0.000	0.739	-1.888	3	0.01	0.01	0.22	
1K	0	-8.304	3.224	-1.530	0.000	-1.507	-0.904	4	0.01	0.01	0.33	
1L	0	-8.304	4.358	-1.530	0.000	-1.507	-1.888	4	0.01	0.01	0.37	
1M	0	3.838	3.224	0.885	0.000	0.739	-0.904	3	0.01	0.01	0.17	
1N	0	3.838	4.358	0.885	0.000	0.739	-1.888	1	0.01	0.01	0.10	
1O	0	3.838	3.224	-1.530	0.000	-1.507	-0.904	4	0.01	0.01	0.31	
1P	0	3.838	4.358	-1.530	0.000	-1.507	-1.888	4	0.01	0.01	0.35	
2	0	-4.052	7.170	-0.611	0.000	-0.730	-2.998	4	0.02	0.01	0.27	
7	0	-0.330	1.998	0.546	0.000	1.155	-0.236	1	0.01	0.00	0.09	
1A	61	-5.697	1.533	0.567	0.000	0.034	0.285	4	0.01	0.01	0.02	
1B	61	-5.697	3.380	0.567	0.000	0.034	0.738	4	0.01	0.01	0.05	
1C	61	-5.697	1.533	-1.212	0.000	-0.408	0.285	4	0.01	0.01	0.09	
1D	61	-5.697	3.380	-1.212	0.000	-0.408	0.738	4	0.01	0.01	0.12	
1E	61	2.816	1.533	0.567	0.000	0.034	0.285	4	0.01	0.01	0.02	
1F	61	2.816	3.380	0.567	0.000	0.034	0.738	1	0.01	0.01	0.02	
1G	61	2.816	1.533	-1.212	0.000	-0.408	0.285	4	0.01	0.01	0.09	
1H	61	2.816	3.380	-1.212	0.000	-0.408	0.738	4	0.01	0.01	0.12	
1I	61	-7.512	1.890	0.885	0.000	0.089	0.488	4	0.01	0.01	0.03	
1J	61	-7.512	3.023	0.885	0.000	0.089	0.535	4	0.01	0.01	0.04	
1K	61	-7.512	1.890	-1.530	0.000	-0.463	0.488	4	0.01	0.01	0.12	
1L	61	-7.512	3.023	-1.530	0.000	-0.463	0.535	4	0.01	0.01	0.12	
1M	61	4.630	1.890	0.885	0.000	0.089	0.488	4	0.01	0.01	0.04	
1N	61	4.630	3.023	0.885	0.000	0.089	0.535	4	0.01	0.01	0.04	
1O	61	4.630	1.890	-1.530	0.000	-0.463	0.488	4	0.01	0.01	0.12	
1P	61	4.630	3.023	-1.530	0.000	-0.463	0.535	4	0.01	0.01	0.12	
2	61	-2.573	4.679	-0.611	0.000	-0.357	0.619	4	0.02	0.00	0.10	
7	61	0.214	1.082	0.546	0.000	0.821	0.705	1	0.00	0.00	0.08	
1A	122	-4.905	0.199	0.567	0.000	-0.407	0.609	4	0.00	0.01	0.11	
1B	122	-4.905	2.045	0.567	0.000	-0.407	2.599	4	0.01	0.01	0.24	
1C	122	-4.905	0.199	-1.212	0.000	0.427	0.609	4	0.01	0.01	0.06	
1D	122	-4.905	2.045	-1.212	0.000	0.427	2.599	1	0.01	0.01	0.10	
1E	122	3.608	0.199	0.567	0.000	-0.407	0.609	4	0.00	0.01	0.11	
1F	122	3.608	2.045	0.567	0.000	-0.407	2.599	4	0.01	0.01	0.24	
1G	122	3.608	0.199	-1.212	0.000	0.427	0.609	1	0.01	0.01	0.05	
1H	122	3.608	2.045	-1.212	0.000	0.427	2.599	1	0.01	0.01	0.10	
1I	122	-6.719	0.555	0.885	0.000	-0.560	1.064	4	0.01	0.01	0.17	
1J	122	-6.719	1.689	0.885	0.000	-0.560	2.144	4	0.01	0.01	0.24	
1K	122	-6.719	0.555	-1.530	0.000	0.580	1.064	1	0.01	0.01	0.08	
1L	122	-6.719	1.689	-1.530	0.000	0.580	2.144	1	0.01	0.01	0.10	
1M	122	5.422	0.555	0.885	0.000	-0.560	1.064	4	0.01	0.01	0.17	
1N	122	5.422	1.689	0.885	0.000	-0.560	2.144	4	0.01	0.01	0.24	
1O	122	5.422	0.555	-1.530	0.000	0.580	1.064	1	0.01	0.01	0.07	
1P	122	5.422	1.689	-1.530	0.000	0.580	2.144	1	0.01	0.01	0.10	
2	122	-1.094	2.188	-0.611	0.000	0.016	2.716	1	0.01	0.00	0.07	
7	122	0.757	0.166	0.546	0.000	0.488	1.086	1	0.00	0.00	0.06	

Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	kN		kN*m										
1A	-6.489	0.475	-0.855	4	0.5729	0.9890	1.0028	--	--	0.02	--	0.15	Snell.imin= 63
1B	-6.489	0.475	2.599	4	0.5729	0.9890	0.9973	--	--	0.02	--	0.26	Snell.imin= 63
1C	-6.489	-1.243	-0.855	4	0.5729	0.9989	1.0028	--	--	0.02	--	0.29	Snell.imin= 63
1D	-6.489	-1.243	2.599	4	0.5729	0.9989	0.9973	--	--	0.02	--	0.39	Snell.imin= 63
1E	3.608	0.475	-0.855	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1F	3.608	0.475	2.599	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1G	3.608	-1.243	-0.855	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1H	3.608	-1.243	2.599	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1I	-8.304	0.739	1.064	4	0.5729	0.9883	0.9998	--	--	0.02	--	0.21	Snell.imin= 63
1J	-8.304	0.739	2.144	4	0.5729	0.9883	0.9953	--	--	0.02	--	0.28	Snell.imin= 63
1K	-8.304	-1.507	1.064	4	0.5729	0.9975	0.9998	--	--	0.02	--	0.35	Snell.imin= 63
1L	-8.304	-1.507	2.144	4	0.5729	0.9975	0.9953	--	--	0.02	--	0.42	Snell.imin= 63
1M	5.422	0.739	1.064	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1N	5.422	0.739	2.144	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1O	5.422	-1.507	1.064	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1P	5.422	-1.507	2.144	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
2	-4.052	-0.730	-2.998	4	0.5729	1.0032	0.9970	--	--	0.01	--	0.32	Snell.imin= 63
7	-0.330	1.155	1.086	1	0.5729	0.9996	0.9998	--	--	0.00	--	0.11	Snell.imin= 63

ASTA NUM. 12 NI 130 NF 110 Lunghezza 112.5 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.22 0.12 2.00 2.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
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## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

	cm	kN			kN*m							
1A	0	0.110	2.434	0.042	0.000	0.045	-1.673	1	0.01	0.00	0.04	
1B	0	0.110	3.496	0.042	0.000	0.045	-2.855	1	0.01	0.00	0.07	
1C	0	0.110	2.434	-0.417	0.000	-0.273	-1.673	4	0.01	0.00	0.12	
1D	0	0.110	3.496	-0.417	0.000	-0.273	-2.855	4	0.01	0.00	0.17	
1E	0	5.558	2.434	0.042	0.000	0.045	-1.673	3	0.01	0.01	0.08	
1F	0	5.558	3.496	0.042	0.000	0.045	-2.855	1	0.01	0.01	0.08	
1G	0	5.558	2.434	-0.417	0.000	-0.273	-1.673	4	0.01	0.01	0.12	
1H	0	5.558	3.496	-0.417	0.000	-0.273	-2.855	4	0.01	0.01	0.17	
1I	0	-0.570	2.419	0.105	0.000	0.097	-1.670	1	0.01	0.00	0.05	
1J	0	-0.570	3.511	0.105	0.000	0.097	-2.858	1	0.01	0.00	0.07	
1K	0	-0.570	2.419	-0.480	0.000	-0.325	-1.670	4	0.01	0.00	0.13	
1L	0	-0.570	3.511	-0.480	0.000	-0.325	-2.858	4	0.01	0.00	0.18	
1M	0	6.238	2.419	0.105	0.000	0.097	-1.670	3	0.01	0.01	0.09	
1N	0	6.238	3.511	0.105	0.000	0.097	-2.858	1	0.01	0.01	0.08	
1O	0	6.238	2.419	-0.480	0.000	-0.325	-1.670	4	0.01	0.01	0.13	
1P	0	6.238	3.511	-0.480	0.000	-0.325	-2.858	4	0.01	0.01	0.18	
2	0	4.549	5.792	-0.293	0.000	-0.181	-4.163	4	0.02	0.01	0.21	
7	0	4.581	1.464	-0.619	0.000	-0.422	-1.243	4	0.00	0.01	0.13	
1A	56	0.104	1.567	0.042	0.000	0.020	-0.574	1	0.01	0.00	0.01	
1B	56	0.104	2.628	0.042	0.000	0.020	-1.107	1	0.01	0.00	0.03	
1C	56	0.104	1.567	-0.417	0.000	-0.037	-0.574	4	0.01	0.00	0.03	
1D	56	0.104	2.628	-0.417	0.000	-0.037	-1.107	4	0.01	0.00	0.05	
1E	56	5.552	1.567	0.042	0.000	0.020	-0.574	3	0.01	0.01	0.03	
1F	56	5.552	2.628	0.042	0.000	0.020	-1.107	3	0.01	0.01	0.06	
1G	56	5.552	1.567	-0.417	0.000	-0.037	-0.574	3	0.01	0.01	0.04	
1H	56	5.552	2.628	-0.417	0.000	-0.037	-1.107	3	0.01	0.01	0.06	
1I	56	-0.576	1.551	0.105	0.000	0.037	-0.567	1	0.01	0.00	0.02	
1J	56	-0.576	2.644	0.105	0.000	0.037	-1.113	1	0.01	0.00	0.03	
1K	56	-0.576	1.551	-0.480	0.000	-0.054	-0.567	4	0.01	0.00	0.03	
1L	56	-0.576	2.644	-0.480	0.000	-0.054	-1.113	4	0.01	0.00	0.06	
1M	56	6.232	1.551	0.105	0.000	0.037	-0.567	3	0.01	0.01	0.04	
1N	56	6.232	2.644	0.105	0.000	0.037	-1.113	3	0.01	0.01	0.06	
1O	56	6.232	1.551	-0.480	0.000	-0.054	-0.567	4	0.01	0.01	0.04	
1P	56	6.232	2.644	-0.480	0.000	-0.054	-1.113	4	0.01	0.01	0.06	
2	56	4.536	3.854	-0.293	0.000	-0.016	-1.450	3	0.01	0.01	0.07	
7	56	4.579	1.214	-0.619	0.000	-0.074	-0.490	4	0.00	0.01	0.04	
1A	113	0.098	0.699	0.042	0.000	-0.005	0.038	4	0.00	0.00	0.00	
1B	113	0.098	1.761	0.042	0.000	-0.005	0.154	4	0.01	0.00	0.01	
1C	113	0.098	0.699	-0.417	0.000	0.200	0.038	1	0.00	0.00	0.02	
1D	113	0.098	1.761	-0.417	0.000	0.200	0.154	1	0.01	0.00	0.02	
1E	113	5.546	0.699	0.042	0.000	-0.005	0.038	1	0.00	0.01	0.01	
1F	113	5.546	1.761	0.042	0.000	-0.005	0.154	3	0.01	0.01	0.01	
1G	113	5.546	0.699	-0.417	0.000	0.200	0.038	1	0.00	0.01	0.02	
1H	113	5.546	1.761	-0.417	0.000	0.200	0.154	3	0.01	0.01	0.05	
1I	113	-0.582	0.684	0.105	0.000	-0.023	0.048	4	0.00	0.00	0.01	
1J	113	-0.582	1.776	0.105	0.000	-0.023	0.143	4	0.01	0.00	0.01	
1K	113	-0.582	0.684	-0.480	0.000	0.217	0.048	4	0.00	0.00	0.02	
1L	113	-0.582	1.776	-0.480	0.000	0.217	0.143	1	0.01	0.00	0.02	
1M	113	6.226	0.684	0.105	0.000	-0.023	0.048	1	0.00	0.01	0.01	
1N	113	6.226	1.776	0.105	0.000	-0.023	0.143	3	0.01	0.01	0.02	
1O	113	6.226	0.684	-0.480	0.000	0.217	0.048	1	0.00	0.01	0.03	
1P	113	6.226	1.776	-0.480	0.000	0.217	0.143	3	0.01	0.01	0.05	
2	113	4.523	1.917	-0.293	0.000	0.149	0.174	3	0.01	0.01	0.04	
7	113	4.577	0.963	-0.619	0.000	0.274	0.123	3	0.00	0.01	0.06	

#### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	0.110	0.045	-1.673	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1B	0.110	0.045	-2.855	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1C	0.110	-0.273	-1.673	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1D	0.110	-0.273	-2.855	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1E	5.558	0.045	-1.673	3	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1F	5.558	0.045	-2.855	3	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1G	5.558	-0.273	-1.673	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1H	5.558	-0.273	-2.855	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1I	-0.582	0.097	-1.670	4	0.6222	1.0001	1.0005	--	--	0.00	--	0.11	Snell.imin= 58
1J	-0.582	0.097	-2.858	4	0.6222	1.0001	1.0004	--	--	0.00	--	0.18	Snell.imin= 58
1K	-0.582	-0.325	-1.670	4	0.6222	0.9993	1.0005	--	--	0.00	--	0.12	Snell.imin= 58
1L	-0.582	-0.325	-2.858	4	0.6222	0.9993	1.0004	--	--	0.00	--	0.20	Snell.imin= 58
1M	6.238	0.097	-1.670	3	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1N	6.238	0.097	-2.858	3	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1O	6.238	-0.325	-1.670	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1P	6.238	-0.325	-2.858	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
2	4.549	-0.181	-4.163	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
7	4.581	-0.422	-1.243	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58

ASTA NUM. 13 NI 151 NF 112 Lungh. 112.5 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.22 1.12 2.00 3.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-1.852	2.391	0.456	0.000	0.390	-1.335	1	0.01	0.00	0.06	
1B	0	-1.852	3.603	0.456	0.000	0.390	-2.603	1	0.01	0.00	0.09	
1C	0	-1.852	2.391	-0.045	0.000	-0.048	-1.335	4	0.01	0.00	0.07	
1D	0	-1.852	3.603	-0.045	0.000	-0.048	-2.603	4	0.01	0.00	0.12	

# Relazione di calcolo delle opere strutturali

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1E	0	1.228	2.391	0.456	0.000	0.390	-1.335	1	0.01	0.00	0.06	
1F	0	1.228	3.603	0.456	0.000	0.390	-2.603	1	0.01	0.00	0.09	
1G	0	1.228	2.391	-0.045	0.000	-0.048	-1.335	4	0.01	0.00	0.07	
1H	0	1.228	3.603	-0.045	0.000	-0.048	-2.603	4	0.01	0.00	0.12	
1I	0	-2.681	2.335	0.547	0.000	0.474	-1.264	1	0.01	0.00	0.07	
1J	0	-2.681	3.659	0.547	0.000	0.474	-2.674	1	0.01	0.00	0.10	
1K	0	-2.681	2.335	-0.136	0.000	-0.132	-1.264	4	0.01	0.00	0.08	
1L	0	-2.681	3.659	-0.136	0.000	-0.132	-2.674	4	0.01	0.00	0.14	
1M	0	2.058	2.335	0.547	0.000	0.474	-1.264	1	0.01	0.00	0.07	
1N	0	2.058	3.659	0.547	0.000	0.474	-2.674	1	0.01	0.00	0.10	
1O	0	2.058	2.335	-0.136	0.000	-0.132	-1.264	4	0.01	0.00	0.08	
1P	0	2.058	3.659	-0.136	0.000	-0.132	-2.674	4	0.01	0.00	0.14	
2	0	-0.468	5.569	0.376	0.000	0.316	-3.654	1	0.02	0.00	0.11	
7	0	0.828	3.156	-0.324	0.000	-0.286	-2.720	4	0.01	0.00	0.16	
1A	56	-1.861	0.961	0.456	0.000	0.133	-0.406	3	0.00	0.00	0.04	
1B	56	-1.861	2.173	0.456	0.000	0.133	-0.966	1	0.01	0.00	0.03	
1C	56	-1.861	0.961	-0.045	0.000	-0.022	-0.406	4	0.00	0.00	0.03	
1D	56	-1.861	2.173	-0.045	0.000	-0.022	-0.966	4	0.01	0.00	0.05	
1E	56	1.219	0.961	0.456	0.000	0.133	-0.406	3	0.00	0.00	0.04	
1F	56	1.219	2.173	0.456	0.000	0.133	-0.966	1	0.01	0.00	0.03	
1G	56	1.219	0.961	-0.045	0.000	-0.022	-0.406	4	0.00	0.00	0.02	
1H	56	1.219	2.173	-0.045	0.000	-0.022	-0.966	4	0.01	0.00	0.05	
1I	56	-2.691	0.905	0.547	0.000	0.166	-0.361	3	0.00	0.00	0.05	
1J	56	-2.691	2.229	0.547	0.000	0.166	-1.010	1	0.01	0.00	0.04	
1K	56	-2.691	0.905	-0.136	0.000	-0.055	-0.361	4	0.00	0.00	0.03	
1L	56	-2.691	2.229	-0.136	0.000	-0.055	-1.010	4	0.01	0.00	0.06	
1M	56	2.048	0.905	0.547	0.000	0.166	-0.361	3	0.00	0.00	0.05	
1N	56	2.048	2.229	0.547	0.000	0.166	-1.010	1	0.01	0.00	0.04	
1O	56	2.048	0.905	-0.136	0.000	-0.055	-0.361	4	0.00	0.00	0.03	
1P	56	2.048	2.229	-0.136	0.000	-0.055	-1.010	4	0.01	0.00	0.05	
2	56	-0.486	2.900	0.376	0.000	0.105	-1.272	1	0.01	0.00	0.04	
7	56	0.821	2.174	-0.324	0.000	-0.104	-1.221	4	0.01	0.00	0.07	
1A	113	-1.871	-0.469	0.456	0.000	-0.124	-0.281	4	0.00	0.00	0.04	
1B	113	-1.871	0.743	0.456	0.000	-0.124	-0.132	4	0.00	0.00	0.03	
1C	113	-1.871	-0.469	-0.045	0.000	0.003	-0.281	4	0.00	0.00	0.02	
1D	113	-1.871	0.743	-0.045	0.000	0.003	-0.132	4	0.00	0.00	0.01	
1E	113	1.209	-0.469	0.456	0.000	-0.124	-0.281	4	0.00	0.00	0.04	
1F	113	1.209	0.743	0.456	0.000	-0.124	-0.132	4	0.00	0.00	0.03	
1G	113	1.209	-0.469	-0.045	0.000	0.003	-0.281	3	0.00	0.00	0.01	
1H	113	1.209	0.743	-0.045	0.000	0.003	-0.132	3	0.00	0.00	0.01	
1I	113	-2.700	-0.525	0.547	0.000	-0.142	-0.262	4	0.00	0.00	0.04	
1J	113	-2.700	0.799	0.547	0.000	-0.142	-0.150	4	0.00	0.00	0.04	
1K	113	-2.700	-0.525	-0.136	0.000	0.022	-0.262	3	0.00	0.00	0.02	
1L	113	-2.700	0.799	-0.136	0.000	0.022	-0.150	3	0.00	0.00	0.01	
1M	113	2.039	-0.525	0.547	0.000	-0.142	-0.262	4	0.00	0.00	0.04	
1N	113	2.039	0.799	0.547	0.000	-0.142	-0.150	4	0.00	0.00	0.03	
1O	113	2.039	-0.525	-0.136	0.000	0.022	-0.262	3	0.00	0.00	0.02	
1P	113	2.039	0.799	-0.136	0.000	0.022	-0.150	3	0.00	0.00	0.01	
2	113	-0.503	0.231	0.376	0.000	-0.107	-0.391	4	0.00	0.00	0.04	
7	113	0.815	1.193	-0.324	0.000	0.078	-0.274	3	0.00	0.00	0.03	

## Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-1.871	0.390	-1.335	4	0.6222	0.9998	1.0024	--	--	0.01	--	0.13	Snell.imin= 58
1B	-1.871	0.390	-2.603	4	0.6222	0.9998	1.0017	--	--	0.01	--	0.18	Snell.imin= 58
1C	-1.871	-0.048	-1.335	4	0.6222	1.0013	1.0024	--	--	0.01	--	0.07	Snell.imin= 58
1D	-1.871	-0.048	-2.603	4	0.6222	1.0013	1.0017	--	--	0.01	--	0.12	Snell.imin= 58
1E	1.228	0.390	-1.335	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1F	1.228	0.390	-2.603	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1G	1.228	-0.048	-1.335	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1H	1.228	-0.048	-2.603	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1I	-2.700	0.474	-1.264	4	0.6222	0.9999	1.0036	--	--	0.01	--	0.14	Snell.imin= 58
1J	-2.700	0.474	-2.674	4	0.6222	0.9999	1.0024	--	--	0.01	--	0.20	Snell.imin= 58
1K	-2.700	-0.132	-1.264	4	0.6222	1.0010	1.0036	--	--	0.01	--	0.09	Snell.imin= 58
1L	-2.700	-0.132	-2.674	4	0.6222	1.0010	1.0024	--	--	0.01	--	0.15	Snell.imin= 58
1M	2.058	0.474	-1.264	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1N	2.058	0.474	-2.674	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1O	2.058	-0.132	-1.264	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1P	2.058	-0.132	-2.674	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
2	-0.503	0.316	-3.654	4	0.6222	0.9999	1.0005	--	--	0.00	--	0.21	Snell.imin= 58
7	0.828	-0.286	-2.720	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58

ASTA NUM. 14 NI 81 NF 116 Lungh. 112.5 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.22 0.12 4.00 4.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-5.161	1.372	0.051	0.000	0.051	-0.556	3	0.00	0.01	0.04	
1B	0	-5.161	2.586	0.051	0.000	0.051	-1.858	1	0.01	0.01	0.05	
1C	0	-5.161	1.372	-0.298	0.000	-0.178	-0.556	4	0.00	0.01	0.07	
1D	0	-5.161	2.586	-0.298	0.000	-0.178	-1.858	4	0.01	0.01	0.13	
1E	0	2.411	1.372	0.051	0.000	0.051	-0.556	3	0.00	0.01	0.04	
1F	0	2.411	2.586	0.051	0.000	0.051	-1.858	1	0.01	0.01	0.05	
1G	0	2.411	1.372	-0.298	0.000	-0.178	-0.556	4	0.00	0.01	0.06	
1H	0	2.411	2.586	-0.298	0.000	-0.178	-1.858	4	0.01	0.01	0.11	
1I	0	-4.875	1.162	0.049	0.000	0.054	-0.331	3	0.00	0.01	0.03	
1J	0	-4.875	2.796	0.049	0.000	0.054	-2.083	1	0.01	0.01	0.06	
1K	0	-4.875	1.162	-0.295	0.000	-0.181	-0.331	4	0.00	0.01	0.06	
1L	0	-4.875	2.796	-0.295	0.000	-0.181	-2.083	4	0.01	0.01	0.13	

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1M	0	2.125	1.162	0.049	0.000	0.054	-0.331	3	0.00	0.00	0.03
1N	0	2.125	2.796	0.049	0.000	0.054	-2.083	1	0.01	0.00	0.06
1O	0	2.125	1.162	-0.295	0.000	-0.181	-0.331	4	0.00	0.00	0.05
1P	0	2.125	2.796	-0.295	0.000	-0.181	-2.083	4	0.01	0.00	0.12
2	0	-0.349	4.149	-0.097	0.000	-0.034	-2.411	4	0.01	0.00	0.11
7	0	-3.317	3.961	-0.056	0.000	-0.010	-2.253	4	0.01	0.01	0.11
1A	56	-5.167	0.505	0.051	0.000	0.022	-0.042	4	0.00	0.01	0.02
1B	56	-5.167	1.718	0.051	0.000	0.022	-0.633	4	0.01	0.01	0.04
1C	56	-5.167	0.505	-0.298	0.000	-0.010	-0.042	4	0.00	0.01	0.02
1D	56	-5.167	1.718	-0.298	0.000	-0.010	-0.633	4	0.01	0.01	0.05
1E	56	2.406	0.505	0.051	0.000	0.022	-0.042	1	0.00	0.01	0.01
1F	56	2.406	1.718	0.051	0.000	0.022	-0.633	3	0.01	0.01	0.03
1G	56	2.406	0.505	-0.298	0.000	-0.010	-0.042	1	0.00	0.01	0.00
1H	56	2.406	1.718	-0.298	0.000	-0.010	-0.633	3	0.01	0.01	0.03
1I	56	-4.881	0.294	0.049	0.000	0.026	0.071	4	0.00	0.01	0.01
1J	56	-4.881	1.929	0.049	0.000	0.026	-0.747	4	0.01	0.01	0.05
1K	56	-4.881	0.294	-0.295	0.000	-0.014	0.071	4	0.00	0.01	0.02
1L	56	-4.881	1.929	-0.295	0.000	-0.014	-0.747	4	0.01	0.01	0.05
1M	56	2.120	0.294	0.049	0.000	0.026	0.071	3	0.00	0.00	0.01
1N	56	2.120	1.929	0.049	0.000	0.026	-0.747	3	0.01	0.00	0.04
1O	56	2.120	0.294	-0.295	0.000	-0.014	0.071	3	0.00	0.00	0.01
1P	56	2.120	1.929	-0.295	0.000	-0.014	-0.747	3	0.01	0.00	0.04
2	56	-0.362	2.211	-0.097	0.000	0.021	-0.622	1	0.01	0.00	0.02
7	56	-3.330	2.023	-0.056	0.000	0.022	-0.570	4	0.01	0.01	0.03
1A	113	-5.172	-0.363	0.051	0.000	-0.008	-0.016	4	0.00	0.01	0.02
1B	113	-5.172	0.850	0.051	0.000	-0.008	0.103	4	0.00	0.01	0.02
1C	113	-5.172	-0.363	-0.298	0.000	0.158	-0.016	4	0.00	0.01	0.02
1D	113	-5.172	0.850	-0.298	0.000	0.158	0.103	4	0.00	0.01	0.02
1E	113	2.400	-0.363	0.051	0.000	-0.008	-0.016	1	0.00	0.01	0.00
1F	113	2.400	0.850	0.051	0.000	-0.008	0.103	3	0.00	0.01	0.01
1G	113	2.400	-0.363	-0.298	0.000	0.158	-0.016	1	0.00	0.01	0.02
1H	113	2.400	0.850	-0.298	0.000	0.158	0.103	3	0.00	0.01	0.04
1I	113	-4.886	-0.573	0.049	0.000	-0.002	-0.015	4	0.00	0.01	0.02
1J	113	-4.886	1.061	0.049	0.000	-0.002	0.102	4	0.00	0.01	0.01
1K	113	-4.886	-0.573	-0.295	0.000	0.152	-0.015	4	0.00	0.01	0.02
1L	113	-4.886	1.061	-0.295	0.000	0.152	0.102	4	0.00	0.01	0.02
1M	113	2.114	-0.573	0.049	0.000	-0.002	-0.015	1	0.00	0.00	0.00
1N	113	2.114	1.061	0.049	0.000	-0.002	0.102	3	0.00	0.00	0.01
1O	113	2.114	-0.573	-0.295	0.000	0.152	-0.015	1	0.00	0.00	0.01
1P	113	2.114	1.061	-0.295	0.000	0.152	0.102	3	0.00	0.00	0.03
2	113	-0.375	0.274	-0.097	0.000	0.075	0.076	1	0.00	0.00	0.01
7	113	-3.343	0.085	-0.056	0.000	0.053	0.023	4	0.00	0.01	0.01

#### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN		kN*m										
1A	-5.172	0.051	-0.556	4	0.6222	1.0022	1.0090	--	--	0.01	--	0.06	Snell.imin= 58
1B	-5.172	0.051	-1.858	4	0.6222	1.0022	1.0043	--	--	0.01	--	0.14	Snell.imin= 58
1C	-5.172	-0.178	-0.556	4	0.6222	0.9902	1.0090	--	--	0.01	--	0.07	Snell.imin= 58
1D	-5.172	-0.178	-1.858	4	0.6222	0.9902	1.0043	--	--	0.01	--	0.15	Snell.imin= 58
1E	2.411	0.051	-0.556	3	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1F	2.411	0.051	-1.858	3	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1G	2.411	-0.178	-0.556	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1H	2.411	-0.178	-1.858	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1I	-4.886	0.054	-0.331	4	0.6222	1.0039	1.0105	--	--	0.01	--	0.04	Snell.imin= 58
1J	-4.886	0.054	-2.083	4	0.6222	1.0039	1.0039	--	--	0.01	--	0.15	Snell.imin= 58
1K	-4.886	-0.181	-0.331	4	0.6222	0.9914	1.0105	--	--	0.01	--	0.05	Snell.imin= 58
1L	-4.886	-0.181	-2.083	4	0.6222	0.9914	1.0039	--	--	0.01	--	0.16	Snell.imin= 58
1M	2.125	0.054	-0.331	3	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1N	2.125	0.054	-2.083	3	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1O	2.125	-0.181	-0.331	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1P	2.125	-0.181	-2.083	4	0.6222	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
2	-0.375	0.075	-2.411	4	0.6222	0.9998	1.0003	--	--	0.00	--	0.15	Snell.imin= 58
7	-3.343	0.053	-2.253	4	0.6222	1.0010	1.0028	--	--	0.01	--	0.16	Snell.imin= 58

**ASTA NUM. 15** NI 80 NF 117 Lunghezza 112,5 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.22 1.12 4.00 5.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN		kN*m		kN*m						
1A	0	-2.391	2.196	0.163	0.000	0.129	-1.064	1	0.01	0.00	0.04	
1B	0	-2.391	3.646	0.163	0.000	0.129	-2.630	1	0.01	0.00	0.07	
1C	0	-2.391	2.196	-0.009	0.000	-0.005	-1.064	4	0.01	0.00	0.05	
1D	0	-2.391	3.646	-0.009	0.000	-0.005	-2.630	4	0.01	0.00	0.12	
1E	0	1.654	2.196	0.163	0.000	0.129	-1.064	1	0.01	0.00	0.04	
1F	0	1.654	3.646	0.163	0.000	0.129	-2.630	1	0.01	0.00	0.07	
1G	0	1.654	2.196	-0.009	0.000	-0.005	-1.064	1	0.01	0.00	0.03	
1H	0	1.654	3.646	-0.009	0.000	-0.005	-2.630	1	0.01	0.00	0.06	
1I	0	-2.548	2.317	0.211	0.000	0.181	-1.205	1	0.01	0.00	0.04	
1J	0	-2.548	3.525	0.211	0.000	0.181	-2.489	1	0.01	0.00	0.07	
1K	0	-2.548	2.317	-0.058	0.000	-0.057	-1.205	4	0.01	0.00	0.07	
1L	0	-2.548	3.525	-0.058	0.000	-0.057	-2.489	4	0.01	0.00	0.12	
1M	0	1.811	2.317	0.211	0.000	0.181	-1.205	1	0.01	0.00	0.04	
1N	0	1.811	3.525	0.211	0.000	0.181	-2.489	1	0.01	0.00	0.07	
1O	0	1.811	2.317	-0.058	0.000	-0.057	-1.205	4	0.01	0.00	0.06	
1P	0	1.811	3.525	-0.058	0.000	-0.057	-2.489	4	0.01	0.00	0.12	
2	0	-1.085	5.383	0.108	0.000	0.090	-3.377	1	0.02	0.00	0.09	
7	0	1.971	6.098	0.313	0.000	0.253	-4.109	1	0.02	0.00	0.12	
1A	56	-2.401	0.766	0.163	0.000	0.036	-0.248	3	0.00	0.00	0.02	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1B	56	-2.401	2.217	0.163	0.000	0.036	-0.963	1	0.01	0.00	0.03	
1C	56	-2.401	0.766	-0.009	0.000	0.001	-0.248	4	0.00	0.00	0.02	
1D	56	-2.401	2.217	-0.009	0.000	0.001	-0.963	4	0.01	0.00	0.05	
1E	56	1.644	0.766	0.163	0.000	0.036	-0.248	3	0.00	0.00	0.02	
1F	56	1.644	2.217	0.163	0.000	0.036	-0.963	1	0.01	0.00	0.03	
1G	56	1.644	0.766	-0.009	0.000	0.001	-0.248	3	0.00	0.00	0.01	
1H	56	1.644	2.217	-0.009	0.000	0.001	-0.963	1	0.01	0.00	0.02	
1I	56	-2.557	0.888	0.211	0.000	0.061	-0.319	3	0.00	0.00	0.03	
1J	56	-2.557	2.095	0.211	0.000	0.061	-0.893	3	0.01	0.00	0.05	
1K	56	-2.557	0.888	-0.058	0.000	-0.023	-0.319	4	0.00	0.00	0.03	
1L	56	-2.557	2.095	-0.058	0.000	-0.023	-0.893	4	0.01	0.00	0.05	
1M	56	1.801	0.888	0.211	0.000	0.061	-0.319	3	0.00	0.00	0.03	
1N	56	1.801	2.095	0.211	0.000	0.061	-0.893	1	0.01	0.00	0.03	
1O	56	1.801	0.888	-0.058	0.000	-0.023	-0.319	4	0.00	0.00	0.02	
1P	56	1.801	2.095	-0.058	0.000	-0.023	-0.893	4	0.01	0.00	0.04	
2	56	-1.103	2.714	0.108	0.000	0.030	-1.100	1	0.01	0.00	0.03	
7	56	1.953	3.429	0.313	0.000	0.077	-1.429	1	0.01	0.00	0.04	
1A	113	-2.410	-0.664	0.163	0.000	-0.056	-0.237	4	0.00	0.00	0.03	
1B	113	-2.410	0.787	0.163	0.000	-0.056	-0.101	4	0.00	0.00	0.02	
1C	113	-2.410	-0.664	-0.009	0.000	0.007	-0.237	4	0.00	0.00	0.02	
1D	113	-2.410	0.787	-0.009	0.000	0.007	-0.101	4	0.00	0.00	0.01	
1E	113	1.635	-0.664	0.163	0.000	-0.056	-0.237	4	0.00	0.00	0.02	
1F	113	1.635	0.787	0.163	0.000	-0.056	-0.101	4	0.00	0.00	0.02	
1G	113	1.635	-0.664	-0.009	0.000	0.007	-0.237	3	0.00	0.00	0.01	
1H	113	1.635	0.787	-0.009	0.000	0.007	-0.101	3	0.00	0.00	0.01	
1I	113	-2.567	-0.542	0.211	0.000	-0.059	-0.236	4	0.00	0.00	0.03	
1J	113	-2.567	0.665	0.211	0.000	-0.059	-0.101	4	0.00	0.00	0.02	
1K	113	-2.567	-0.542	-0.058	0.000	0.010	-0.236	4	0.00	0.00	0.02	
1L	113	-2.567	0.665	-0.058	0.000	0.010	-0.101	4	0.00	0.00	0.01	
1M	113	1.792	-0.542	0.211	0.000	-0.059	-0.236	4	0.00	0.00	0.02	
1N	113	1.792	0.665	0.211	0.000	-0.059	-0.101	4	0.00	0.00	0.02	
1O	113	1.792	-0.542	-0.058	0.000	0.010	-0.236	3	0.00	0.00	0.01	
1P	113	1.792	0.665	-0.058	0.000	0.010	-0.101	1	0.00	0.00	0.01	
2	113	-1.121	0.045	0.108	0.000	-0.031	-0.324	4	0.00	0.00	0.02	
7	113	1.935	0.760	0.313	0.000	-0.099	-0.251	4	0.00	0.00	0.03	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\chi_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-2.410	0.129	-1.064	4	0.5941	0.9990	1.0028	--	--	0.01	--	0.07	Snell.imin= 58
1B	-2.410	0.129	-2.630	4	0.5941	0.9990	1.0017	--	--	0.01	--	0.14	Snell.imin= 58
1C	-2.410	0.007	-1.064	4	0.5941	0.9975	1.0028	--	--	0.01	--	0.05	Snell.imin= 58
1D	-2.410	0.007	-2.630	4	0.5941	0.9975	1.0017	--	--	0.01	--	0.12	Snell.imin= 58
1E	1.654	0.129	-1.064	4	0.5941	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1F	1.654	0.129	-2.630	4	0.5941	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1G	1.654	0.007	-1.064	3	0.5941	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1H	1.654	0.007	-2.630	3	0.5941	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1I	-2.567	0.181	-1.205	4	0.5941	0.9997	1.0028	--	--	0.01	--	0.09	Snell.imin= 58
1J	-2.567	0.181	-2.489	4	0.5941	0.9997	1.0019	--	--	0.01	--	0.14	Snell.imin= 58
1K	-2.567	-0.057	-1.205	4	0.5941	1.0008	1.0028	--	--	0.01	--	0.07	Snell.imin= 58
1L	-2.567	-0.057	-2.489	4	0.5941	1.0008	1.0019	--	--	0.01	--	0.12	Snell.imin= 58
1M	1.811	0.181	-1.205	4	0.5941	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1N	1.811	0.181	-2.489	4	0.5941	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1O	1.811	-0.057	-1.205	4	0.5941	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
1P	1.811	-0.057	-2.489	4	0.5941	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58
2	-1.121	0.090	-3.377	4	0.5941	0.9998	1.0008	--	--	0.00	--	0.16	Snell.imin= 58
7	1.971	0.253	-4.109	4	0.5941	0.0000	0.0000	--	--	--	--	--	Snell.imin= 58

ASTA NUM. 16 NI 112 NF 110 Lungh. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.

qy medio: 0.22 1.00 1.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-4.715	-0.236	-0.033	0.000	0.003	-0.108	4	0.00	0.01	0.02	
1B	0	-4.715	0.716	-0.033	0.000	0.003	-0.230	4	0.00	0.01	0.02	
1C	0	-4.715	-0.236	-0.275	0.000	-0.123	-0.108	4	0.00	0.01	0.04	
1D	0	-4.715	0.716	-0.275	0.000	-0.123	-0.230	4	0.00	0.01	0.05	
1E	0	1.529	-0.236	-0.033	0.000	0.003	-0.108	3	0.00	0.00	0.01	
1F	0	1.529	0.716	-0.033	0.000	0.003	-0.230	3	0.00	0.00	0.01	
1G	0	1.529	-0.236	-0.275	0.000	-0.123	-0.108	4	0.00	0.00	0.03	
1H	0	1.529	0.716	-0.275	0.000	-0.123	-0.230	4	0.00	0.00	0.03	
1I	0	-6.041	-0.439	-0.028	0.000	0.021	-0.124	4	0.00	0.01	0.02	
1J	0	-6.041	0.920	-0.028	0.000	0.021	-0.215	4	0.00	0.01	0.03	
1K	0	-6.041	-0.439	-0.280	0.000	-0.141	-0.124	4	0.00	0.01	0.05	
1L	0	-6.041	0.920	-0.280	0.000	-0.141	-0.215	4	0.00	0.01	0.05	
1M	0	2.855	-0.439	-0.028	0.000	0.021	-0.124	1	0.00	0.01	0.01	
1N	0	2.855	0.920	-0.028	0.000	0.021	-0.215	3	0.00	0.01	0.02	
1O	0	2.855	-0.439	-0.280	0.000	-0.141	-0.124	4	0.00	0.01	0.03	
1P	0	2.855	0.920	-0.280	0.000	-0.141	-0.215	4	0.00	0.01	0.04	
2	0	-2.885	0.442	-0.255	0.000	-0.106	-0.321	4	0.00	0.00	0.04	
7	0	0.365	1.280	0.052	0.000	0.077	-0.227	1	0.00	0.00	0.01	
1A	45	-4.715	-0.783	-0.033	0.000	0.014	-0.355	4	0.00	0.01	0.03	
1B	45	-4.715	0.169	-0.033	0.000	0.014	-0.013	4	0.00	0.01	0.01	
1C	45	-4.715	-0.783	-0.275	0.000	0.004	-0.355	4	0.00	0.01	0.03	
1D	45	-4.715	0.169	-0.275	0.000	0.004	-0.013	4	0.00	0.01	0.01	
1E	45	1.529	-0.783	-0.033	0.000	0.014	-0.355	3	0.00	0.00	0.02	
1F	45	1.529	0.169	-0.033	0.000	0.014	-0.013	1	0.00	0.00	0.00	
1G	45	1.529	-0.783	-0.275	0.000	0.004	-0.355	3	0.00	0.00	0.02	
1H	45	1.529	0.169	-0.275	0.000	0.004	-0.013	1	0.00	0.00	0.00	
1I	45	-6.041	-0.987	-0.028	0.000	0.030	0.148	4	0.00	0.01	0.01	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1J	45	-6.041	0.372	-0.028	0.000	0.030	-0.516	4	0.00	0.01	0.04	
1K	45	-6.041	-0.987	-0.280	0.000	-0.011	0.148	4	0.00	0.01	0.02	
1L	45	-6.041	0.372	-0.280	0.000	-0.011	-0.516	4	0.00	0.01	0.04	
1M	45	2.855	-0.987	-0.028	0.000	0.030	0.148	3	0.00	0.01	0.02	
1N	45	2.855	0.372	-0.028	0.000	0.030	-0.516	3	0.00	0.01	0.03	
1O	45	2.855	-0.987	-0.280	0.000	-0.011	0.148	3	0.00	0.01	0.01	
1P	45	2.855	0.372	-0.280	0.000	-0.011	-0.516	3	0.00	0.01	0.03	
2	45	-2.885	-0.270	-0.255	0.000	0.008	-0.282	4	0.00	0.00	0.02	
7	45	0.365	0.568	0.052	0.000	0.054	0.189	1	0.00	0.00	0.01	
1A	90	-4.715	-1.331	-0.033	0.000	0.026	-0.848	4	0.00	0.01	0.05	
1B	90	-4.715	-0.379	-0.033	0.000	0.026	-0.043	4	0.00	0.01	0.02	
1C	90	-4.715	-1.331	-0.275	0.000	0.131	-0.848	3	0.00	0.01	0.06	
1D	90	-4.715	-0.379	-0.275	0.000	0.131	-0.043	4	0.00	0.01	0.02	
1E	90	1.529	-1.331	-0.033	0.000	0.026	-0.848	1	0.00	0.00	0.02	
1F	90	1.529	-0.379	-0.033	0.000	0.026	-0.043	1	0.00	0.00	0.00	
1G	90	1.529	-1.331	-0.275	0.000	0.131	-0.848	1	0.00	0.00	0.03	
1H	90	1.529	-0.379	-0.275	0.000	0.131	-0.043	1	0.00	0.00	0.01	
1I	90	-6.041	-1.535	-0.028	0.000	0.039	0.172	4	0.01	0.01	0.01	
1J	90	-6.041	-0.175	-0.028	0.000	0.039	-1.064	4	0.00	0.01	0.06	
1K	90	-6.041	-1.535	-0.280	0.000	0.119	0.172	4	0.01	0.01	0.02	
1L	90	-6.041	-0.175	-0.280	0.000	0.119	-1.064	3	0.00	0.01	0.07	
1M	90	2.855	-1.535	-0.028	0.000	0.039	0.172	3	0.01	0.01	0.02	
1N	90	2.855	-0.175	-0.028	0.000	0.039	-1.064	1	0.00	0.01	0.03	
1O	90	2.855	-1.535	-0.280	0.000	0.119	0.172	3	0.01	0.01	0.03	
1P	90	2.855	-0.175	-0.280	0.000	0.119	-1.064	1	0.00	0.01	0.04	
2	90	-2.885	-0.982	-0.255	0.000	0.123	-0.564	3	0.00	0.00	0.05	
7	90	0.365	-0.144	0.052	0.000	0.031	0.284	1	0.00	0.00	0.01	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-4.715	0.026	-0.848	4	0.6678	1.0051	1.0047	--	--	0.01	--	0.07	Snell.imin= 46
1B	-4.715	0.026	-0.230	4	0.6678	1.0051	1.0075	--	--	0.01	--	0.03	Snell.imin= 46
1C	-4.715	0.131	-0.848	4	0.6678	0.9917	1.0047	--	--	0.01	--	0.08	Snell.imin= 46
1D	-4.715	0.131	-0.230	4	0.6678	0.9917	1.0075	--	--	0.01	--	0.04	Snell.imin= 46
1E	1.529	0.026	-0.848	3	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1F	1.529	0.026	-0.230	3	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1G	1.529	0.131	-0.848	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1H	1.529	0.131	-0.230	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1I	-6.041	0.039	0.172	4	0.6678	1.0135	1.0039	--	--	0.02	--	0.02	Snell.imin= 46
1J	-6.041	0.039	-1.064	4	0.6678	1.0135	1.0065	--	--	0.02	--	0.09	Snell.imin= 46
1K	-6.041	-0.141	0.172	4	0.6678	0.9909	1.0039	--	--	0.02	--	0.03	Snell.imin= 46
1L	-6.041	-0.141	-1.064	4	0.6678	0.9909	1.0065	--	--	0.02	--	0.10	Snell.imin= 46
1M	2.855	0.039	0.172	3	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1N	2.855	0.039	-1.064	3	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1O	2.855	-0.141	0.172	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1P	2.855	-0.141	-1.064	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
2	-2.885	0.123	-0.564	4	0.6678	0.9955	1.0049	--	--	0.01	--	0.05	Snell.imin= 46
7	0.365	0.077	0.284	1	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46

ASTA NUM. 17 NI 110 NF 105 Lungh. 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.

qy medio: 0.22 1.00 1.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-4.327	0.184	5.662	0.000	0.307	-0.127	3	0.04	0.01	0.07	
1B	0	-4.327	1.120	5.662	0.000	0.307	-0.909	3	0.04	0.01	0.10	
1C	0	-4.327	0.184	-0.104	0.000	0.045	-0.127	3	0.00	0.01	0.02	
1D	0	-4.327	1.120	-0.104	0.000	0.045	-0.909	3	0.00	0.01	0.05	
1E	0	1.709	0.184	5.662	0.000	0.307	-0.127	3	0.04	0.00	0.06	
1F	0	1.709	1.120	5.662	0.000	0.307	-0.909	1	0.04	0.00	0.05	
1G	0	1.709	0.184	-0.104	0.000	0.045	-0.127	3	0.00	0.00	0.02	
1H	0	1.709	1.120	-0.104	0.000	0.045	-0.909	1	0.00	0.00	0.03	
1I	0	-4.700	0.216	5.679	0.000	0.301	0.112	4	0.04	0.01	0.02	
1J	0	-4.700	1.089	5.679	0.000	0.301	-1.148	3	0.04	0.01	0.11	
1K	0	-4.700	0.216	-0.121	0.000	0.051	0.112	4	0.00	0.01	0.01	
1L	0	-4.700	1.089	-0.121	0.000	0.051	-1.148	3	0.00	0.01	0.06	
1M	0	2.082	0.216	5.679	0.000	0.301	0.112	3	0.04	0.00	0.06	
1N	0	2.082	1.089	5.679	0.000	0.301	-1.148	1	0.04	0.00	0.05	
1O	0	2.082	0.216	-0.121	0.000	0.051	0.112	3	0.00	0.00	0.02	
1P	0	2.082	1.089	-0.121	0.000	0.051	-1.148	1	0.00	0.00	0.03	
2	0	-2.423	1.491	4.465	0.000	0.272	-0.689	3	0.03	0.00	0.08	
7	0	2.178	1.207	6.116	0.000	0.305	0.191	4	0.04	0.00	0.03	
1A	5	-4.327	0.123	5.662	0.000	0.021	-0.080	4	0.04	0.01	0.02	
1B	5	-4.327	1.059	5.662	0.000	0.021	-0.894	4	0.04	0.01	0.05	
1C	5	-4.327	0.123	-0.104	0.000	0.053	-0.080	3	0.00	0.01	0.02	
1D	5	-4.327	1.059	-0.104	0.000	0.053	-0.894	3	0.00	0.01	0.05	
1E	5	1.709	0.123	5.662	0.000	0.021	-0.080	3	0.04	0.00	0.01	
1F	5	1.709	1.059	5.662	0.000	0.021	-0.894	1	0.04	0.00	0.02	
1G	5	1.709	0.123	-0.104	0.000	0.053	-0.080	3	0.00	0.00	0.01	
1H	5	1.709	1.059	-0.104	0.000	0.053	-0.894	1	0.00	0.00	0.03	
1I	5	-4.700	0.155	5.679	0.000	0.015	0.161	4	0.04	0.01	0.01	
1J	5	-4.700	1.028	5.679	0.000	0.015	-1.135	4	0.04	0.01	0.06	
1K	5	-4.700	0.155	-0.121	0.000	0.060	0.161	4	0.00	0.01	0.01	
1L	5	-4.700	1.028	-0.121	0.000	0.060	-1.135	3	0.00	0.01	0.06	
1M	5	2.082	0.155	5.679	0.000	0.015	0.161	4	0.04	0.00	0.01	
1N	5	2.082	1.028	5.679	0.000	0.015	-1.135	1	0.04	0.00	0.03	
1O	5	2.082	0.155	-0.121	0.000	0.060	0.161	4	0.00	0.00	0.02	
1P	5	2.082	1.028	-0.121	0.000	0.060	-1.135	1	0.00	0.00	0.03	
2	5	-2.423	1.412	4.465	0.000	0.049	-0.617	3	0.03	0.00	0.04	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

7	5	2.178	1.128	6.116	0.000	-0.000	0.249	4	0.04	0.00	0.02	
1A	10	-4.327	0.063	5.662	0.000	-0.265	-0.036	4	0.04	0.01	0.06	
1B	10	-4.327	0.999	5.662	0.000	-0.265	-0.881	4	0.04	0.01	0.10	
1C	10	-4.327	0.063	-0.104	0.000	0.062	-0.036	4	0.00	0.01	0.02	
1D	10	-4.327	0.999	-0.104	0.000	0.062	-0.881	3	0.00	0.01	0.05	
1E	10	1.709	0.063	5.662	0.000	-0.265	-0.036	4	0.04	0.00	0.05	
1F	10	1.709	0.999	5.662	0.000	-0.265	-0.881	4	0.04	0.00	0.09	
1G	10	1.709	0.063	-0.104	0.000	0.062	-0.036	1	0.00	0.00	0.01	
1H	10	1.709	0.999	-0.104	0.000	0.062	-0.881	1	0.00	0.00	0.03	
1I	10	-4.700	0.094	5.679	0.000	-0.272	0.207	4	0.04	0.01	0.06	
1J	10	-4.700	0.967	5.679	0.000	-0.272	-1.125	4	0.04	0.01	0.11	
1K	10	-4.700	0.094	-0.121	0.000	0.069	0.207	4	0.00	0.01	0.02	
1L	10	-4.700	0.967	-0.121	0.000	0.069	-1.125	3	0.00	0.01	0.06	
1M	10	2.082	0.094	5.679	0.000	-0.272	0.207	4	0.04	0.00	0.06	
1N	10	2.082	0.967	5.679	0.000	-0.272	-1.125	4	0.04	0.00	0.10	
1O	10	2.082	0.094	-0.121	0.000	0.069	0.207	4	0.00	0.00	0.02	
1P	10	2.082	0.967	-0.121	0.000	0.069	-1.125	1	0.00	0.00	0.03	
2	10	-2.423	1.333	4.465	0.000	-0.174	-0.548	4	0.03	0.00	0.06	
7	10	2.178	1.049	6.116	0.000	-0.306	0.304	4	0.04	0.00	0.08	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	k <sub>LT</sub>	χ <sub>LT</sub>	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-4.327	0.307	-0.127	4	0.8224	0.9971	1.0028	--	--	0.01	--	0.07	Snell.imin= 5
1B	-4.327	0.307	-0.909	4	0.8224	0.9971	1.0061	--	--	0.01	--	0.12	Snell.imin= 5
1C	-4.327	0.062	-0.127	4	0.8224	1.0052	1.0028	--	--	0.01	--	0.03	Snell.imin= 5
1D	-4.327	0.062	-0.909	3	0.8224	1.0052	1.0061	--	--	0.01	--	0.06	Snell.imin= 5
1E	1.709	0.307	-0.127	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1F	1.709	0.307	-0.909	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1G	1.709	0.062	-0.127	3	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1H	1.709	0.062	-0.909	1	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1I	-4.700	0.301	0.207	4	0.8224	0.9966	1.0044	--	--	0.01	--	0.07	Snell.imin= 5
1J	-4.700	0.301	-1.148	4	0.8224	0.9966	1.0067	--	--	0.01	--	0.13	Snell.imin= 5
1K	-4.700	0.069	0.207	4	0.8224	1.0057	1.0044	--	--	0.01	--	0.03	Snell.imin= 5
1L	-4.700	0.069	-1.148	3	0.8224	1.0057	1.0067	--	--	0.01	--	0.07	Snell.imin= 5
1M	2.082	0.301	0.207	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1N	2.082	0.301	-1.148	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1O	2.082	0.069	0.207	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1P	2.082	0.069	-1.148	1	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
2	-2.423	0.272	-0.689	4	0.8224	0.9990	1.0029	--	--	0.00	--	0.09	Snell.imin= 5
7	2.178	-0.306	0.304	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5

**ASTA NUM. 18** NI 116 NF 117 Lungh. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.

qy medio: 0.22 1.00 1.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota	
	cm	kN			kN*m								
1A	0	-1.993	0.495	0.007	0.000	0.001	-0.099	4	0.00	0.00	0.01		
1B	0	-1.993	1.375	0.007	0.000	0.001	-0.876	4	0.00	0.00	0.04		
1C	0	-1.993	0.495	-0.187	0.000	-0.115	-0.099	4	0.00	0.00	0.03		
1D	0	-1.993	1.375	-0.187	0.000	-0.115	-0.876	4	0.00	0.00	0.06		
1E	0	1.382	0.495	0.007	0.000	0.001	-0.099	3	0.00	0.00	0.01		
1F	0	1.382	1.375	0.007	0.000	0.001	-0.876	1	0.00	0.00	0.02		
1G	0	1.382	0.495	-0.187	0.000	-0.115	-0.099	4	0.00	0.00	0.03		
1H	0	1.382	1.375	-0.187	0.000	-0.115	-0.876	4	0.00	0.00	0.06		
1I	0	-1.962	0.281	-0.009	0.000	-0.013	0.123	4	0.00	0.00	0.01		
1J	0	-1.962	1.588	-0.009	0.000	-0.013	-1.099	4	0.01	0.00	0.05		
1K	0	-1.962	0.281	-0.171	0.000	-0.101	0.123	4	0.00	0.00	0.03		
1L	0	-1.962	1.588	-0.171	0.000	-0.101	-1.099	4	0.01	0.00	0.07		
1M	0	1.351	0.281	-0.009	0.000	-0.013	0.123	4	0.00	0.00	0.01		
1N	0	1.351	1.588	-0.009	0.000	-0.013	-1.099	4	0.01	0.00	0.05		
1O	0	1.351	0.281	-0.171	0.000	-0.101	0.123	4	0.00	0.00	0.03		
1P	0	1.351	1.588	-0.171	0.000	-0.101	-1.099	4	0.01	0.00	0.06		
2	0	-0.878	1.167	-0.111	0.000	-0.069	-0.677	4	0.00	0.00	0.04		
7	0	1.658	0.486	-0.248	0.000	-0.124	-0.005	4	0.00	0.00	0.02		
1A	45	-1.993	-0.053	0.007	0.000	-0.003	-0.024	4	0.00	0.00	0.01		
1B	45	-1.993	0.827	0.007	0.000	-0.003	-0.357	4	0.00	0.00	0.02		
1C	45	-1.993	-0.053	-0.187	0.000	-0.030	-0.024	4	0.00	0.00	0.01		
1D	45	-1.993	0.827	-0.187	0.000	-0.030	-0.357	4	0.00	0.00	0.03		
1E	45	1.382	-0.053	0.007	0.000	-0.003	-0.024	1	0.00	0.00	0.00		
1F	45	1.382	0.827	0.007	0.000	-0.003	-0.357	3	0.00	0.00	0.02		
1G	45	1.382	-0.053	-0.187	0.000	-0.030	-0.024	4	0.00	0.00	0.01		
1H	45	1.382	0.827	-0.187	0.000	-0.030	-0.357	4	0.00	0.00	0.02		
1I	45	-1.962	-0.267	-0.009	0.000	-0.011	0.143	4	0.00	0.00	0.01		
1J	45	-1.962	1.041	-0.009	0.000	-0.011	-0.523	4	0.00	0.00	0.03		
1K	45	-1.962	-0.267	-0.171	0.000	-0.021	0.143	4	0.00	0.00	0.01		
1L	45	-1.962	1.041	-0.171	0.000	-0.021	-0.523	4	0.00	0.00	0.03		
1M	45	1.351	-0.267	-0.009	0.000	-0.011	0.143	4	0.00	0.00	0.01		
1N	45	1.351	1.041	-0.009	0.000	-0.011	-0.523	4	0.00	0.00	0.03		
1O	45	1.351	-0.267	-0.171	0.000	-0.021	0.143	4	0.00	0.00	0.01		
1P	45	1.351	1.041	-0.171	0.000	-0.021	-0.523	4	0.00	0.00	0.03		
2	45	-0.878	0.455	-0.111	0.000	-0.019	-0.312	4	0.00	0.00	0.02		
7	45	1.658	-0.226	-0.248	0.000	-0.013	0.053	4	0.00	0.00	0.01		
1A	90	-1.993	-0.601	0.007	0.000	-0.007	-0.195	4	0.00	0.00	0.02		
1B	90	-1.993	0.279	0.007	0.000	-0.007	-0.084	4	0.00	0.00	0.01		
1C	90	-1.993	-0.601	-0.187	0.000	0.056	-0.195	3	0.00	0.00	0.02		
1D	90	-1.993	0.279	-0.187	0.000	0.056	-0.084	3	0.00	0.00	0.02		
1E	90	1.382	-0.601	0.007	0.000	-0.007	-0.195	3	0.00	0.00	0.01		
1F	90	1.382	0.279	0.007	0.000	-0.007	-0.084	3	0.00	0.00	0.01		

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1G	90	1.382	-0.601	-0.187	0.000	0.056	-0.195	3	0.00	0.00	0.02	
1H	90	1.382	0.279	-0.187	0.000	0.056	-0.084	3	0.00	0.00	0.02	
1I	90	-1.962	-0.814	-0.009	0.000	-0.010	-0.085	4	0.00	0.00	0.01	
1J	90	-1.962	0.493	-0.009	0.000	-0.010	-0.194	4	0.00	0.00	0.02	
1K	90	-1.962	-0.814	-0.171	0.000	0.058	-0.085	3	0.00	0.00	0.02	
1L	90	-1.962	0.493	-0.171	0.000	0.058	-0.194	3	0.00	0.00	0.02	
1M	90	1.351	-0.814	-0.009	0.000	-0.010	-0.085	3	0.00	0.00	0.01	
1N	90	1.351	0.493	-0.009	0.000	-0.010	-0.194	3	0.00	0.00	0.01	
1O	90	1.351	-0.814	-0.171	0.000	0.058	-0.085	3	0.00	0.00	0.02	
1P	90	1.351	0.493	-0.171	0.000	0.058	-0.194	3	0.00	0.00	0.02	
2	90	-0.878	-0.258	-0.111	0.000	0.031	-0.268	3	0.00	0.00	0.02	
7	90	1.658	-0.939	-0.248	0.000	0.099	-0.209	3	0.00	0.00	0.03	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-1.993	-0.007	-0.195	4	0.6678	1.0006	1.0036	--	--	0.01	--	0.02	Snell.imin= 46
1B	-1.993	-0.007	-0.876	4	0.6678	1.0006	1.0019	--	--	0.01	--	0.05	Snell.imin= 46
1C	-1.993	-0.115	-0.195	4	0.6678	0.9989	1.0036	--	--	0.01	--	0.04	Snell.imin= 46
1D	-1.993	-0.115	-0.876	4	0.6678	0.9989	1.0019	--	--	0.01	--	0.06	Snell.imin= 46
1E	1.382	-0.007	-0.195	3	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1F	1.382	-0.007	-0.876	3	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1G	1.382	-0.115	-0.195	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1H	1.382	-0.115	-0.876	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1I	-1.962	-0.013	0.143	4	0.6678	1.0056	1.0022	--	--	0.01	--	0.01	Snell.imin= 46
1J	-1.962	-0.013	-1.099	4	0.6678	1.0056	1.0020	--	--	0.01	--	0.06	Snell.imin= 46
1K	-1.962	-0.101	0.143	4	0.6678	0.9984	1.0022	--	--	0.01	--	0.03	Snell.imin= 46
1L	-1.962	-0.101	-1.099	4	0.6678	0.9984	1.0020	--	--	0.01	--	0.07	Snell.imin= 46
1M	1.351	-0.013	0.143	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1N	1.351	-0.013	-1.099	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1O	1.351	-0.101	0.143	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1P	1.351	-0.101	-1.099	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
2	-0.878	-0.069	-0.677	4	0.6678	0.9996	1.0013	--	--	0.00	--	0.04	Snell.imin= 46
7	1.658	-0.124	-0.209	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46

**ASTA NUM. 19** NI 105 NF 116 Lunghezza 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.

qy medio: 0.22 1.00 1.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-4.233	0.118	4.576	0.000	0.195	-0.163	3	0.03	0.01	0.05	
1B	0	-4.233	1.006	4.576	0.000	0.195	-0.973	3	0.03	0.01	0.08	
1C	0	-4.233	0.118	-0.424	0.000	-0.044	-0.163	4	0.00	0.01	0.03	
1D	0	-4.233	1.006	-0.424	0.000	-0.044	-0.973	4	0.00	0.01	0.06	
1E	0	2.129	0.118	4.576	0.000	0.195	-0.163	3	0.03	0.00	0.04	
1F	0	2.129	1.006	4.576	0.000	0.195	-0.973	1	0.03	0.00	0.04	
1G	0	2.129	0.118	-0.424	0.000	-0.044	-0.163	4	0.00	0.00	0.02	
1H	0	2.129	1.006	-0.424	0.000	-0.044	-0.973	4	0.00	0.00	0.05	
1I	0	-4.369	0.188	4.602	0.000	0.215	0.077	4	0.03	0.01	0.02	
1J	0	-4.369	0.936	4.602	0.000	0.215	-1.213	3	0.03	0.01	0.09	
1K	0	-4.369	0.188	-0.450	0.000	-0.064	0.077	4	0.00	0.01	0.02	
1L	0	-4.369	0.936	-0.450	0.000	-0.064	-1.213	4	0.00	0.01	0.08	
1M	0	2.265	0.188	4.602	0.000	0.215	0.077	3	0.03	0.01	0.04	
1N	0	2.265	0.936	4.602	0.000	0.215	-1.213	1	0.03	0.01	0.05	
1O	0	2.265	0.188	-0.450	0.000	-0.064	0.077	4	0.00	0.01	0.02	
1P	0	2.265	0.936	-0.450	0.000	-0.064	-1.213	4	0.00	0.01	0.06	
2	0	-2.183	0.517	1.774	0.000	0.033	-0.766	3	0.01	0.00	0.04	
7	0	2.695	0.060	1.727	0.000	-0.006	-0.004	1	0.01	0.01	0.00	
1A	5	-4.233	0.057	4.576	0.000	-0.038	-0.146	4	0.03	0.01	0.03	
1B	5	-4.233	0.945	4.576	0.000	-0.038	-0.937	4	0.03	0.01	0.06	
1C	5	-4.233	0.057	-0.424	0.000	-0.019	-0.146	4	0.00	0.01	0.02	
1D	5	-4.233	0.945	-0.424	0.000	-0.019	-0.937	4	0.00	0.01	0.06	
1E	5	2.129	0.057	4.576	0.000	-0.038	-0.146	4	0.03	0.00	0.02	
1F	5	2.129	0.945	4.576	0.000	-0.038	-0.937	4	0.03	0.00	0.05	
1G	5	2.129	0.057	-0.424	0.000	-0.019	-0.146	4	0.00	0.00	0.01	
1H	5	2.129	0.945	-0.424	0.000	-0.019	-0.937	4	0.00	0.00	0.05	
1I	5	-4.369	0.127	4.602	0.000	-0.018	0.098	4	0.03	0.01	0.01	
1J	5	-4.369	0.875	4.602	0.000	-0.018	-1.181	4	0.03	0.01	0.07	
1K	5	-4.369	0.127	-0.450	0.000	-0.039	0.098	4	0.00	0.01	0.02	
1L	5	-4.369	0.875	-0.450	0.000	-0.039	-1.181	4	0.00	0.01	0.07	
1M	5	2.265	0.127	4.602	0.000	-0.018	0.098	4	0.03	0.01	0.01	
1N	5	2.265	0.875	4.602	0.000	-0.018	-1.181	4	0.03	0.01	0.06	
1O	5	2.265	0.127	-0.450	0.000	-0.039	0.098	4	0.00	0.01	0.02	
1P	5	2.265	0.875	-0.450	0.000	-0.039	-1.181	4	0.00	0.01	0.06	
2	5	-2.183	0.437	1.774	0.000	-0.056	-0.743	4	0.01	0.00	0.05	
7	5	2.695	-0.019	1.727	0.000	-0.092	-0.003	4	0.01	0.01	0.02	
1A	10	-4.233	-0.004	4.576	0.000	-0.270	-0.132	4	0.03	0.01	0.07	
1B	10	-4.233	0.884	4.576	0.000	-0.270	-0.904	4	0.03	0.01	0.10	
1C	10	-4.233	-0.004	-0.424	0.000	0.006	-0.132	4	0.00	0.01	0.02	
1D	10	-4.233	0.884	-0.424	0.000	0.006	-0.904	4	0.00	0.01	0.05	
1E	10	2.129	-0.004	4.576	0.000	-0.270	-0.132	4	0.03	0.00	0.06	
1F	10	2.129	0.884	4.576	0.000	-0.270	-0.904	4	0.03	0.00	0.09	
1G	10	2.129	-0.004	-0.424	0.000	0.006	-0.132	3	0.00	0.00	0.01	
1H	10	2.129	0.884	-0.424	0.000	0.006	-0.904	1	0.00	0.00	0.02	
1I	10	-4.369	0.066	4.602	0.000	-0.251	0.116	4	0.03	0.01	0.05	
1J	10	-4.369	0.814	4.602	0.000	-0.251	-1.152	4	0.03	0.01	0.11	
1K	10	-4.369	0.066	-0.450	0.000	-0.014	0.116	4	0.00	0.01	0.01	
1L	10	-4.369	0.814	-0.450	0.000	-0.014	-1.152	4	0.00	0.01	0.06	
1M	10	2.265	0.066	4.602	0.000	-0.251	0.116	4	0.03	0.01	0.05	
1N	10	2.265	0.814	4.602	0.000	-0.251	-1.152	4	0.03	0.01	0.09	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

10	10	2.265	0.066	-0.450	0.000	-0.014	0.116	3	0.00	0.01	0.01			
1P	10	2.265	0.814	-0.450	0.000	-0.014	-1.152	1	0.00	0.01	0.03			
2	10	-2.183	0.358	1.774	0.000	-0.145	-0.723	4	0.01	0.00	0.06			
7	10	2.695	-0.098	1.727	0.000	-0.178	-0.006	4	0.01	0.01	0.04			

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-4.233	-0.270	-0.163	4	0.8224	0.9978	1.0052	--	--	0.01	--	0.06	Snell.imin= 5
1B	-4.233	-0.270	-0.973	4	0.8224	0.9978	1.0058	--	--	0.01	--	0.09	Snell.imin= 5
1C	-4.233	-0.044	-0.163	4	0.8224	1.0008	1.0052	--	--	0.01	--	0.02	Snell.imin= 5
1D	-4.233	-0.044	-0.973	4	0.8224	1.0008	1.0058	--	--	0.01	--	0.06	Snell.imin= 5
1E	2.129	-0.270	-0.163	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1F	2.129	-0.270	-0.973	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1G	2.129	-0.044	-0.163	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1H	2.129	-0.044	-0.973	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1I	-4.369	-0.251	0.116	4	0.8224	0.9971	1.0047	--	--	0.01	--	0.06	Snell.imin= 5
1J	-4.369	-0.251	-1.213	4	0.8224	0.9971	1.0060	--	--	0.01	--	0.10	Snell.imin= 5
1K	-4.369	-0.064	0.116	4	0.8224	1.0026	1.0047	--	--	0.01	--	0.02	Snell.imin= 5
1L	-4.369	-0.064	-1.213	4	0.8224	1.0026	1.0060	--	--	0.01	--	0.07	Snell.imin= 5
1M	2.265	-0.251	0.116	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1N	2.265	-0.251	-1.213	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1O	2.265	-0.064	0.116	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1P	2.265	-0.064	-1.213	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
2	-2.183	-0.145	-0.766	4	0.8224	1.0002	1.0030	--	--	0.00	--	0.06	Snell.imin= 5
7	2.695	-0.178	-0.006	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5

**ASTA NUM. 20** NI 57 NF 104 Lungh. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.  
qy medio: 0.22 1.00 1.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-0.837	-0.943	0.226	0.000	0.080	-0.241	3	0.00	0.00	0.03	
1B	0	-0.837	-0.207	0.226	0.000	0.080	-0.408	1	0.00	0.00	0.02	
1C	0	-0.837	-0.943	-0.202	0.000	-0.136	-0.241	4	0.00	0.00	0.04	
1D	0	-0.837	-0.207	-0.202	0.000	-0.136	-0.408	4	0.00	0.00	0.04	
1E	0	5.397	-0.943	0.226	0.000	0.080	-0.241	1	0.00	0.01	0.02	
1F	0	5.397	-0.207	0.226	0.000	0.080	-0.408	3	0.00	0.01	0.04	
1G	0	5.397	-0.943	-0.202	0.000	-0.136	-0.241	4	0.00	0.01	0.04	
1H	0	5.397	-0.207	-0.202	0.000	-0.136	-0.408	4	0.00	0.01	0.05	
1I	0	-0.394	-0.962	0.294	0.000	0.161	-0.241	1	0.00	0.00	0.02	
1J	0	-0.394	-0.188	0.294	0.000	0.161	-0.408	1	0.00	0.00	0.02	
1K	0	-0.394	-0.962	-0.270	0.000	-0.217	-0.241	4	0.00	0.00	0.05	
1L	0	-0.394	-0.188	-0.270	0.000	-0.217	-0.408	4	0.00	0.00	0.06	
1M	0	4.954	-0.962	0.294	0.000	0.161	-0.241	1	0.00	0.01	0.02	
1N	0	4.954	-0.188	0.294	0.000	0.161	-0.408	3	0.00	0.01	0.05	
1O	0	4.954	-0.962	-0.270	0.000	-0.217	-0.241	4	0.00	0.01	0.05	
1P	0	4.954	-0.188	-0.270	0.000	-0.217	-0.408	4	0.00	0.01	0.06	
2	0	3.006	-1.055	-0.050	0.000	-0.072	-0.618	4	0.00	0.01	0.04	
7	0	3.597	-1.075	-0.193	0.000	-0.182	-0.448	4	0.00	0.01	0.06	
1A	45	-0.837	-1.491	0.226	0.000	-0.024	-0.821	4	0.00	0.00	0.04	
1B	45	-0.837	-0.755	0.226	0.000	-0.024	-0.592	4	0.00	0.00	0.03	
1C	45	-0.837	-1.491	-0.202	0.000	-0.043	-0.821	4	0.00	0.00	0.04	
1D	45	-0.837	-0.755	-0.202	0.000	-0.043	-0.592	4	0.00	0.00	0.03	
1E	45	5.397	-1.491	0.226	0.000	-0.024	-0.821	3	0.00	0.01	0.05	
1F	45	5.397	-0.755	0.226	0.000	-0.024	-0.592	3	0.00	0.01	0.04	
1G	45	5.397	-1.491	-0.202	0.000	-0.043	-0.821	4	0.00	0.01	0.05	
1H	45	5.397	-0.755	-0.202	0.000	-0.043	-0.592	4	0.00	0.01	0.04	
1I	45	-0.394	-1.510	0.294	0.000	0.025	-0.828	1	0.00	0.00	0.02	
1J	45	-0.394	-0.736	0.294	0.000	0.025	-0.586	1	0.00	0.00	0.02	
1K	45	-0.394	-1.510	-0.270	0.000	-0.091	-0.828	4	0.00	0.00	0.05	
1L	45	-0.394	-0.736	-0.270	0.000	-0.091	-0.586	4	0.00	0.00	0.04	
1M	45	4.954	-1.510	0.294	0.000	0.025	-0.828	3	0.00	0.01	0.05	
1N	45	4.954	-0.736	0.294	0.000	0.025	-0.586	3	0.00	0.01	0.04	
1O	45	4.954	-1.510	-0.270	0.000	-0.091	-0.828	4	0.00	0.01	0.06	
1P	45	4.954	-0.736	-0.270	0.000	-0.091	-0.586	4	0.00	0.01	0.05	
2	45	3.006	-1.767	-0.050	0.000	-0.049	-1.253	4	0.01	0.01	0.06	
7	45	3.597	-1.787	-0.193	0.000	-0.095	-1.092	4	0.01	0.01	0.07	
1A	90	-0.837	-2.039	0.226	0.000	-0.129	-1.647	4	0.01	0.00	0.09	
1B	90	-0.837	-1.303	0.226	0.000	-0.129	-1.023	4	0.00	0.00	0.07	
1C	90	-0.837	-2.039	-0.202	0.000	0.051	-1.647	1	0.01	0.00	0.04	
1D	90	-0.837	-1.303	-0.202	0.000	0.051	-1.023	1	0.00	0.00	0.03	
1E	90	5.397	-2.039	0.226	0.000	-0.129	-1.647	4	0.01	0.01	0.10	
1F	90	5.397	-1.303	0.226	0.000	-0.129	-1.023	4	0.00	0.01	0.07	
1G	90	5.397	-2.039	-0.202	0.000	0.051	-1.647	3	0.01	0.01	0.08	
1H	90	5.397	-1.303	-0.202	0.000	0.051	-1.023	3	0.00	0.01	0.06	
1I	90	-0.394	-2.058	0.294	0.000	-0.111	-1.661	4	0.01	0.00	0.09	
1J	90	-0.394	-1.284	0.294	0.000	-0.111	-1.009	4	0.00	0.00	0.06	
1K	90	-0.394	-2.058	-0.270	0.000	0.034	-1.661	1	0.01	0.00	0.04	
1L	90	-0.394	-1.284	-0.270	0.000	0.034	-1.009	1	0.00	0.00	0.03	
1M	90	4.954	-2.058	0.294	0.000	-0.111	-1.661	4	0.01	0.01	0.09	
1N	90	4.954	-1.284	0.294	0.000	-0.111	-1.009	4	0.00	0.01	0.07	
1O	90	4.954	-2.058	-0.270	0.000	0.034	-1.661	3	0.01	0.01	0.08	
1P	90	4.954	-1.284	-0.270	0.000	0.034	-1.009	3	0.00	0.01	0.05	
2	90	3.006	-2.479	-0.050	0.000	-0.027	-2.208	4	0.01	0.01	0.10	
7	90	3.597	-2.499	-0.193	0.000	-0.008	-2.056	1	0.01	0.01	0.05	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**



NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	-----	-----	-----	---	---	---	---	---	---	---	---	---	---
	kN	kN*m											
1A	-0.837	-0.129	-1.647	4	0.6568	0.9994	1.0006	--	--	0.00	--	0.09	Snell.imin= 46
1B	-0.837	-0.129	-1.023	4	0.6568	0.9994	1.0009	--	--	0.00	--	0.07	Snell.imin= 46
1C	-0.837	-0.136	-1.647	4	0.6568	0.9998	1.0006	--	--	0.00	--	0.09	Snell.imin= 46
1D	-0.837	-0.136	-1.023	4	0.6568	0.9998	1.0009	--	--	0.00	--	0.07	Snell.imin= 46
1E	5.397	-0.129	-1.647	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1F	5.397	-0.129	-1.023	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1G	5.397	-0.136	-1.647	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1H	5.397	-0.136	-1.023	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1I	-0.394	0.161	-1.661	4	0.6568	0.9996	1.0003	--	--	0.00	--	0.10	Snell.imin= 46
1J	-0.394	0.161	-1.009	4	0.6568	0.9996	1.0004	--	--	0.00	--	0.07	Snell.imin= 46
1K	-0.394	-0.217	-1.661	4	0.6568	1.0001	1.0003	--	--	0.00	--	0.11	Snell.imin= 46
1L	-0.394	-0.217	-1.009	4	0.6568	1.0001	1.0004	--	--	0.00	--	0.08	Snell.imin= 46
1M	4.954	0.161	-1.661	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1N	4.954	0.161	-1.009	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1O	4.954	-0.217	-1.661	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1P	4.954	-0.217	-1.009	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
2	3.006	-0.072	-2.208	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
7	3.597	-0.182	-2.056	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46

**ASTA NUM. 21**    NI 55    NF 24    Lungh.    90.0 cm    SEZ. 1    Ps    L 200X 90X 10

categoria: p.p. y Permanente qy tot.

qy medio:    0.22    1.00    1.22    kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	---	-----	-----	-----	-----	-----	-----	---	---	---	---	---
	cm	kN			kN*m							
1A	0	-2.475	-0.632	0.180	0.000	0.074	-0.021	4	0.00	0.00	0.01	
1B	0	-2.475	0.175	0.180	0.000	0.074	-0.204	3	0.00	0.00	0.02	
1C	0	-2.475	-0.632	-0.080	0.000	-0.078	-0.021	4	0.00	0.00	0.02	
1D	0	-2.475	0.175	-0.080	0.000	-0.078	-0.204	4	0.00	0.00	0.03	
1E	0	0.818	-0.632	0.180	0.000	0.074	-0.021	1	0.00	0.00	0.01	
1F	0	0.818	0.175	0.180	0.000	0.074	-0.204	3	0.00	0.00	0.02	
1G	0	0.818	-0.632	-0.080	0.000	-0.078	-0.021	4	0.00	0.00	0.02	
1H	0	0.818	0.175	-0.080	0.000	-0.078	-0.204	4	0.00	0.00	0.02	
1I	0	-2.503	-0.596	0.314	0.000	0.169	-0.013	4	0.00	0.00	0.02	
1J	0	-2.503	0.139	0.314	0.000	0.169	-0.213	3	0.00	0.00	0.04	
1K	0	-2.503	-0.596	-0.215	0.000	-0.173	-0.013	4	0.00	0.00	0.04	
1L	0	-2.503	0.139	-0.215	0.000	-0.173	-0.213	4	0.00	0.00	0.05	
1M	0	0.846	-0.596	0.314	0.000	0.169	-0.013	1	0.00	0.00	0.01	
1N	0	0.846	0.139	0.314	0.000	0.169	-0.213	3	0.00	0.00	0.04	
1O	0	0.846	-0.596	-0.215	0.000	-0.173	-0.013	4	0.00	0.00	0.03	
1P	0	0.846	0.139	-0.215	0.000	-0.173	-0.213	4	0.00	0.00	0.04	
2	0	-1.491	-0.212	0.095	0.000	-0.004	-0.208	4	0.00	0.00	0.01	
7	0	-5.376	-0.729	-0.067	0.000	-0.056	-0.086	4	0.00	0.01	0.03	

1A	45	-2.475	-1.180	0.180	0.000	-0.010	-0.452	4	0.00	0.00	0.03	
1B	45	-2.475	-0.373	0.180	0.000	-0.010	-0.225	4	0.00	0.00	0.02	
1C	45	-2.475	-1.180	-0.080	0.000	-0.039	-0.452	4	0.00	0.00	0.03	
1D	45	-2.475	-0.373	-0.080	0.000	-0.039	-0.225	4	0.00	0.00	0.02	
1E	45	0.818	-1.180	0.180	0.000	-0.010	-0.452	4	0.00	0.00	0.02	
1F	45	0.818	-0.373	0.180	0.000	-0.010	-0.225	4	0.00	0.00	0.01	
1G	45	0.818	-1.180	-0.080	0.000	-0.039	-0.452	4	0.00	0.00	0.03	
1H	45	0.818	-0.373	-0.080	0.000	-0.039	-0.225	4	0.00	0.00	0.02	
1I	45	-2.503	-1.144	0.314	0.000	0.025	-0.439	3	0.00	0.00	0.03	
1J	45	-2.503	-0.409	0.314	0.000	0.025	-0.238	3	0.00	0.00	0.02	
1K	45	-2.503	-1.144	-0.215	0.000	-0.074	-0.439	4	0.00	0.00	0.04	
1L	45	-2.503	-0.409	-0.215	0.000	-0.074	-0.238	4	0.00	0.00	0.03	
1M	45	0.846	-1.144	0.314	0.000	0.025	-0.439	1	0.00	0.00	0.01	
1N	45	0.846	-0.409	0.314	0.000	0.025	-0.238	3	0.00	0.00	0.02	
1O	45	0.846	-1.144	-0.215	0.000	-0.074	-0.439	4	0.00	0.00	0.03	
1P	45	0.846	-0.409	-0.215	0.000	-0.074	-0.238	4	0.00	0.00	0.02	
2	45	-1.491	-0.924	0.095	0.000	-0.047	-0.464	4	0.00	0.00	0.03	
7	45	-5.376	-1.441	-0.067	0.000	-0.026	-0.574	4	0.00	0.01	0.05	

1A	90	-2.475	-1.728	0.180	0.000	-0.094	-1.130	4	0.01	0.00	0.07	
1B	90	-2.475	-0.920	0.180	0.000	-0.094	-0.493	4	0.00	0.00	0.05	
1C	90	-2.475	-1.728	-0.080	0.000	0.000	-1.130	4	0.01	0.00	0.05	
1D	90	-2.475	-0.920	-0.080	0.000	0.000	-0.493	4	0.00	0.00	0.03	
1E	90	0.818	-1.728	0.180	0.000	-0.094	-1.130	4	0.01	0.00	0.06	
1F	90	0.818	-0.920	0.180	0.000	-0.094	-0.493	4	0.00	0.00	0.04	
1G	90	0.818	-1.728	-0.080	0.000	0.000	-1.130	1	0.01	0.00	0.03	
1H	90	0.818	-0.920	-0.080	0.000	0.000	-0.493	1	0.00	0.00	0.01	
1I	90	-2.503	-1.691	0.314	0.000	-0.119	-1.112	4	0.01	0.00	0.08	
1J	90	-2.503	-0.957	0.314	0.000	-0.119	-0.511	4	0.00	0.00	0.05	
1K	90	-2.503	-1.691	-0.215	0.000	0.024	-1.112	1	0.01	0.00	0.03	
1L	90	-2.503	-0.957	-0.215	0.000	0.024	-0.511	3	0.00	0.00	0.03	
1M	90	0.846	-1.691	0.314	0.000	-0.119	-1.112	4	0.01	0.00	0.07	
1N	90	0.846	-0.957	0.314	0.000	-0.119	-0.511	4	0.00	0.00	0.04	
1O	90	0.846	-1.691	-0.215	0.000	0.024	-1.112	1	0.01	0.00	0.03	
1P	90	0.846	-0.957	-0.215	0.000	0.024	-0.511	1	0.00	0.00	0.01	
2	90	-1.491	-1.636	0.095	0.000	-0.089	-1.040	4	0.01	0.00	0.06	
7	90	-5.376	-2.153	-0.067	0.000	0.004	-1.382	4	0.01	0.01	0.07	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	-----	-----	-----	---	---	---	---	---	---	---	---	---	---
	kN	kN*m											
1A	-2.475	-0.094	-1.130	4	0.6678	0.9967	1.0017	--	--	0.01	--	0.06	Snell.imin= 46
1B	-2.475	-0.094	-0.493	4	0.6678	0.9967	1.0034	--	--	0.01	--	0.04	Snell.imin= 46

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1C	-2.475	-0.078	-1.130	4	0.6678	1.0019	1.0017	--	--	0.01	--	0.06	Snell.imin=	46
1D	-2.475	-0.078	-0.493	4	0.6678	1.0019	1.0034	--	--	0.01	--	0.03	Snell.imin=	46
1E	0.818	-0.094	-1.130	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1F	0.818	-0.094	-0.493	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1G	0.818	-0.078	-1.130	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1H	0.818	-0.078	-0.493	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1I	-2.503	0.169	-1.112	4	0.6678	0.9972	1.0017	--	--	0.01	--	0.06	Snell.imin=	46
1J	-2.503	0.169	-0.511	4	0.6678	0.9972	1.0035	--	--	0.01	--	0.04	Snell.imin=	46
1K	-2.503	-0.173	-1.112	4	0.6678	1.0010	1.0017	--	--	0.01	--	0.07	Snell.imin=	46
1L	-2.503	-0.173	-0.511	4	0.6678	1.0010	1.0035	--	--	0.01	--	0.04	Snell.imin=	46
1M	0.846	0.169	-1.112	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1N	0.846	0.169	-0.511	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1O	0.846	-0.173	-1.112	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1P	0.846	-0.173	-0.511	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
2	-1.491	-0.089	-1.040	4	0.6678	1.0013	1.0015	--	--	0.00	--	0.05	Snell.imin=	46
7	-5.376	-0.056	-1.382	4	0.6678	1.0032	1.0040	--	--	0.01	--	0.08	Snell.imin=	46

**ASTA NUM. 22** NI 140 NF 107 Lunghe. 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.  
qy medio: 0.22 1.00 1.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-5.286	-1.187	0.341	0.000	0.066	-0.509	3	0.00	0.01	0.04	
1B	0	-5.286	0.035	0.341	0.000	0.066	-1.209	3	0.00	0.01	0.07	
1C	0	-5.286	-1.187	-3.665	0.000	-0.160	-0.509	4	0.03	0.01	0.07	
1D	0	-5.286	0.035	-3.665	0.000	-0.160	-1.209	4	0.03	0.01	0.10	
1E	0	1.592	-1.187	0.341	0.000	0.066	-0.509	3	0.00	0.00	0.03	
1F	0	1.592	0.035	0.341	0.000	0.066	-1.209	1	0.00	0.00	0.04	
1G	0	1.592	-1.187	-3.665	0.000	-0.160	-0.509	4	0.03	0.00	0.05	
1H	0	1.592	0.035	-3.665	0.000	-0.160	-1.209	4	0.03	0.00	0.08	
1I	0	-5.368	-0.967	0.593	0.000	0.091	-0.393	3	0.00	0.01	0.04	
1J	0	-5.368	-0.184	0.593	0.000	0.091	-1.325	3	0.00	0.01	0.08	
1K	0	-5.368	-0.967	-3.917	0.000	-0.185	-0.393	4	0.03	0.01	0.07	
1L	0	-5.368	-0.184	-3.917	0.000	-0.185	-1.325	4	0.03	0.01	0.11	
1M	0	1.674	-0.967	0.593	0.000	0.091	-0.393	3	0.00	0.00	0.03	
1N	0	1.674	-0.184	0.593	0.000	0.091	-1.325	1	0.00	0.00	0.04	
1O	0	1.674	-0.967	-3.917	0.000	-0.185	-0.393	4	0.03	0.00	0.05	
1P	0	1.674	-0.184	-3.917	0.000	-0.185	-1.325	4	0.03	0.00	0.09	
2	0	-3.337	-2.556	-3.077	0.000	-0.086	-0.934	4	0.02	0.01	0.07	
7	0	-9.736	-1.032	1.424	0.000	0.213	-1.364	3	0.01	0.01	0.11	
1A	5	-5.286	-1.248	0.341	0.000	0.044	-0.561	3	0.00	0.01	0.04	
1B	5	-5.286	-0.026	0.341	0.000	0.044	-1.218	3	0.00	0.01	0.07	
1C	5	-5.286	-1.248	-3.665	0.000	0.028	-0.561	4	0.03	0.01	0.04	
1D	5	-5.286	-0.026	-3.665	0.000	0.028	-1.218	4	0.03	0.01	0.07	
1E	5	1.592	-1.248	0.341	0.000	0.044	-0.561	3	0.00	0.00	0.03	
1F	5	1.592	-0.026	0.341	0.000	0.044	-1.218	1	0.00	0.00	0.03	
1G	5	1.592	-1.248	-3.665	0.000	0.028	-0.561	3	0.03	0.00	0.03	
1H	5	1.592	-0.026	-3.665	0.000	0.028	-1.218	1	0.03	0.00	0.03	
1I	5	-5.368	-1.028	0.593	0.000	0.057	-0.438	3	0.00	0.01	0.04	
1J	5	-5.368	-0.245	0.593	0.000	0.057	-1.341	3	0.00	0.01	0.07	
1K	5	-5.368	-1.028	-3.917	0.000	0.015	-0.438	4	0.03	0.01	0.03	
1L	5	-5.368	-0.245	-3.917	0.000	0.015	-1.341	4	0.03	0.01	0.07	
1M	5	1.674	-1.028	0.593	0.000	0.057	-0.438	3	0.00	0.00	0.03	
1N	5	1.674	-0.245	0.593	0.000	0.057	-1.341	1	0.00	0.00	0.04	
1O	5	1.674	-1.028	-3.917	0.000	0.015	-0.438	3	0.03	0.00	0.02	
1P	5	1.674	-0.245	-3.917	0.000	0.015	-1.341	1	0.03	0.00	0.03	
2	5	-3.337	-2.635	-3.077	0.000	0.067	-1.063	3	0.02	0.00	0.06	
7	5	-9.736	-1.112	1.424	0.000	0.141	-1.418	3	0.01	0.01	0.10	
1A	10	-5.286	-1.309	0.341	0.000	0.022	-0.616	4	0.00	0.01	0.04	
1B	10	-5.286	-0.087	0.341	0.000	0.022	-1.229	4	0.00	0.01	0.07	
1C	10	-5.286	-1.309	-3.665	0.000	0.217	-0.616	3	0.03	0.01	0.07	
1D	10	-5.286	-0.087	-3.665	0.000	0.217	-1.229	3	0.03	0.01	0.10	
1E	10	1.592	-1.309	0.341	0.000	0.022	-0.616	1	0.00	0.00	0.02	
1F	10	1.592	-0.087	0.341	0.000	0.022	-1.229	1	0.00	0.00	0.03	
1G	10	1.592	-1.309	-3.665	0.000	0.217	-0.616	1	0.03	0.00	0.03	
1H	10	1.592	-0.087	-3.665	0.000	0.217	-1.229	1	0.03	0.00	0.05	
1I	10	-5.368	-1.089	0.593	0.000	0.022	-0.486	4	0.00	0.01	0.04	
1J	10	-5.368	-0.306	0.593	0.000	0.022	-1.359	4	0.00	0.01	0.07	
1K	10	-5.368	-1.089	-3.917	0.000	0.216	-0.486	3	0.03	0.01	0.07	
1L	10	-5.368	-0.306	-3.917	0.000	0.216	-1.359	3	0.03	0.01	0.10	
1M	10	1.674	-1.089	0.593	0.000	0.022	-0.486	3	0.00	0.00	0.03	
1N	10	1.674	-0.306	0.593	0.000	0.022	-1.359	1	0.00	0.00	0.04	
1O	10	1.674	-1.089	-3.917	0.000	0.216	-0.486	3	0.03	0.00	0.06	
1P	10	1.674	-0.306	-3.917	0.000	0.216	-1.359	1	0.03	0.00	0.05	
2	10	-3.337	-2.714	-3.077	0.000	0.221	-1.197	1	0.02	0.00	0.05	
7	10	-9.736	-1.191	1.424	0.000	0.070	-1.475	4	0.01	0.02	0.09	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γmin.	ky	kz	kLT	γLT	I.S.n.	I.S.m.	I.S.	Nota	
	kN	kN*m												
1A	-5.286	0.066	-0.616	4	0.8247	1.0048	1.0082	--	--	0.01	--	0.05	Snell.imin=	5
1B	-5.286	0.066	-1.229	4	0.8247	1.0048	1.0094	--	--	0.01	--	0.07	Snell.imin=	5
1C	-5.286	0.217	-0.616	4	0.8247	0.9965	1.0082	--	--	0.01	--	0.05	Snell.imin=	5
1D	-5.286	0.217	-1.229	4	0.8247	0.9965	1.0094	--	--	0.01	--	0.08	Snell.imin=	5
1E	1.592	0.066	-0.616	3	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1F	1.592	0.066	-1.229	1	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1G	1.592	0.217	-0.616	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1H	1.592	0.217	-1.229	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1I	-5.368	0.091	-0.486	4	0.8247	1.0042	1.0082	--	--	0.01	--	0.04	Snell.imin=	5
1J	-5.368	0.091	-1.359	4	0.8247	1.0042	1.0094	--	--	0.01	--	0.08	Snell.imin=	5

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1K	-5.368	0.216	-0.486	4	0.8247	0.9955	1.0082	--	--	0.01	--	0.05	Snell.imin=	5
1L	-5.368	0.216	-1.359	4	0.8247	0.9955	1.0094	--	--	0.01	--	0.08	Snell.imin=	5
1M	1.674	0.091	-0.486	3	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1N	1.674	0.091	-1.359	1	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1O	1.674	0.216	-0.486	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1P	1.674	0.216	-1.359	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
2	-3.337	0.221	-1.197	4	0.8247	0.9995	1.0050	--	--	0.01	--	0.07	Snell.imin=	5
7	-9.736	0.213	-1.475	4	0.8247	1.0088	1.0164	--	--	0.02	--	0.10	Snell.imin=	5

ASTA NUM. 23 NI 129 NF 107 Lunghezza 109.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.22 0.13 2.00 2.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm		kN			kN*m						
1A	0	-1.342	3.149	0.327	0.000	0.200	-2.451	1	0.01	0.00	0.07	
1B	0	-1.342	3.947	0.327	0.000	0.200	-3.263	1	0.01	0.00	0.09	
1C	0	-1.342	3.149	-0.108	0.000	-0.107	-2.451	4	0.01	0.00	0.12	
1D	0	-1.342	3.947	-0.108	0.000	-0.107	-3.263	4	0.01	0.00	0.16	
1E	0	4.362	3.149	0.327	0.000	0.200	-2.451	1	0.01	0.01	0.08	
1F	0	4.362	3.947	0.327	0.000	0.200	-3.263	1	0.01	0.01	0.10	
1G	0	4.362	3.149	-0.108	0.000	-0.107	-2.451	4	0.01	0.01	0.13	
1H	0	4.362	3.947	-0.108	0.000	-0.107	-3.263	4	0.01	0.01	0.16	
1I	0	-1.335	3.120	0.382	0.000	0.240	-2.381	1	0.01	0.00	0.07	
1J	0	-1.335	3.976	0.382	0.000	0.240	-3.333	1	0.01	0.00	0.10	
1K	0	-1.335	3.120	-0.162	0.000	-0.148	-2.381	4	0.01	0.00	0.13	
1L	0	-1.335	3.976	-0.162	0.000	-0.148	-3.333	4	0.01	0.00	0.17	
1M	0	4.355	3.120	0.382	0.000	0.240	-2.381	1	0.01	0.01	0.08	
1N	0	4.355	3.976	0.382	0.000	0.240	-3.333	1	0.01	0.01	0.10	
1O	0	4.355	3.120	-0.162	0.000	-0.148	-2.381	4	0.01	0.01	0.13	
1P	0	4.355	3.976	-0.162	0.000	-0.148	-3.333	4	0.01	0.01	0.17	
2	0	2.717	7.617	0.205	0.000	0.086	-6.053	1	0.03	0.01	0.15	
7	0	-0.512	3.820	-0.312	0.000	-0.270	-3.772	4	0.01	0.00	0.21	
1A	55	-1.342	2.309	0.327	0.000	0.020	-0.986	1	0.01	0.00	0.03	
1B	55	-1.342	3.106	0.327	0.000	0.020	-1.320	1	0.01	0.00	0.03	
1C	55	-1.342	2.309	-0.108	0.000	-0.048	-0.986	4	0.01	0.00	0.05	
1D	55	-1.342	3.106	-0.108	0.000	-0.048	-1.320	4	0.01	0.00	0.07	
1E	55	4.362	2.309	0.327	0.000	0.020	-0.986	3	0.01	0.01	0.05	
1F	55	4.362	3.106	0.327	0.000	0.020	-1.320	3	0.01	0.01	0.06	
1G	55	4.362	2.309	-0.108	0.000	-0.048	-0.986	4	0.01	0.01	0.06	
1H	55	4.362	3.106	-0.108	0.000	-0.048	-1.320	4	0.01	0.01	0.07	
1I	55	-1.335	2.279	0.382	0.000	0.031	-0.885	1	0.01	0.00	0.02	
1J	55	-1.335	3.136	0.382	0.000	0.031	-1.420	1	0.01	0.00	0.04	
1K	55	-1.335	2.279	-0.162	0.000	-0.058	-0.885	4	0.01	0.00	0.05	
1L	55	-1.335	3.136	-0.162	0.000	-0.058	-1.420	4	0.01	0.00	0.07	
1M	55	4.355	2.279	0.382	0.000	0.031	-0.885	3	0.01	0.01	0.05	
1N	55	4.355	3.136	0.382	0.000	0.031	-1.420	3	0.01	0.01	0.07	
1O	55	4.355	2.279	-0.162	0.000	-0.058	-0.885	4	0.01	0.01	0.05	
1P	55	4.355	3.136	-0.162	0.000	-0.058	-1.420	4	0.01	0.01	0.07	
2	55	2.717	5.740	0.205	0.000	-0.026	-2.414	4	0.02	0.01	0.11	
7	55	-0.512	3.578	-0.312	0.000	-0.100	-1.756	4	0.01	0.00	0.09	
1A	109	-1.342	1.468	0.327	0.000	-0.159	0.022	4	0.00	0.00	0.03	
1B	109	-1.342	2.266	0.327	0.000	-0.159	0.165	4	0.01	0.00	0.04	
1C	109	-1.342	1.468	-0.108	0.000	0.012	0.022	4	0.00	0.00	0.00	
1D	109	-1.342	2.266	-0.108	0.000	0.012	0.165	4	0.01	0.00	0.01	
1E	109	4.362	1.468	0.327	0.000	-0.159	0.022	4	0.00	0.01	0.04	
1F	109	4.362	2.266	0.327	0.000	-0.159	0.165	4	0.01	0.01	0.04	
1G	109	4.362	1.468	-0.108	0.000	0.012	0.022	1	0.00	0.01	0.01	
1H	109	4.362	2.266	-0.108	0.000	0.012	0.165	3	0.01	0.01	0.01	
1I	109	-1.335	1.439	0.382	0.000	-0.177	0.152	4	0.00	0.00	0.04	
1J	109	-1.335	2.295	0.382	0.000	-0.177	0.035	4	0.01	0.00	0.03	
1K	109	-1.335	1.439	-0.162	0.000	0.031	0.152	4	0.00	0.00	0.01	
1L	109	-1.335	2.295	-0.162	0.000	0.031	0.035	4	0.01	0.00	0.00	
1M	109	4.355	1.439	0.382	0.000	-0.177	0.152	4	0.00	0.01	0.05	
1N	109	4.355	2.295	0.382	0.000	-0.177	0.035	4	0.01	0.01	0.04	
1O	109	4.355	1.439	-0.162	0.000	0.031	0.152	3	0.00	0.01	0.02	
1P	109	4.355	2.295	-0.162	0.000	0.031	0.035	1	0.01	0.01	0.01	
2	109	2.717	3.862	0.205	0.000	-0.137	0.202	4	0.01	0.01	0.04	
7	109	-0.512	3.335	-0.312	0.000	0.070	0.128	1	0.01	0.00	0.01	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	kN		kN*m										
1A	-1.342	0.200	-2.451	4	0.6020	0.9982	1.0010	--	--	0.00	--	0.19	Snell.imin= 56
1B	-1.342	0.200	-3.263	4	0.6020	0.9982	1.0008	--	--	0.00	--	0.24	Snell.imin= 56
1C	-1.342	-0.107	-2.451	4	0.6020	1.0006	1.0010	--	--	0.00	--	0.17	Snell.imin= 56
1D	-1.342	-0.107	-3.263	4	0.6020	1.0006	1.0008	--	--	0.00	--	0.22	Snell.imin= 56
1E	4.362	0.200	-2.451	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1F	4.362	0.200	-3.263	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1G	4.362	-0.107	-2.451	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1H	4.362	-0.107	-3.263	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1I	-1.335	0.240	-2.381	4	0.6020	0.9984	1.0009	--	--	0.00	--	0.19	Snell.imin= 56
1J	-1.335	0.240	-3.333	4	0.6020	0.9984	1.0009	--	--	0.00	--	0.25	Snell.imin= 56
1K	-1.335	-0.148	-2.381	4	0.6020	1.0003	1.0009	--	--	0.00	--	0.18	Snell.imin= 56
1L	-1.335	-0.148	-3.333	4	0.6020	1.0003	1.0009	--	--	0.00	--	0.23	Snell.imin= 56
1M	4.355	0.240	-2.381	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1N	4.355	0.240	-3.333	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1O	4.355	-0.148	-2.381	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1P	4.355	-0.148	-3.333	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
2	2.717	-0.137	-6.053	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
7	-0.512	-0.270	-3.772	4	0.6020	1.0000	1.0003	--	--	0.00	--	0.28	Snell.imin= 56

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

ASTA NUM. 24 NI 150 NF 120 Lungh. 109.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.22 1.13 2.00 3.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-1.684	1.866	0.470	0.000	0.408	-0.723	1	0.01	0.00	0.05	
1B	0	-1.684	2.924	0.470	0.000	0.408	-1.797	1	0.01	0.00	0.07	
1C	0	-1.684	1.866	-0.169	0.000	-0.137	-0.723	4	0.01	0.00	0.06	
1D	0	-1.684	2.924	-0.169	0.000	-0.137	-1.797	4	0.01	0.00	0.10	
1E	0	2.041	1.866	0.470	0.000	0.408	-0.723	3	0.01	0.00	0.10	
1F	0	2.041	2.924	0.470	0.000	0.408	-1.797	1	0.01	0.00	0.07	
1G	0	2.041	1.866	-0.169	0.000	-0.137	-0.723	4	0.01	0.00	0.06	
1H	0	2.041	2.924	-0.169	0.000	-0.137	-1.797	4	0.01	0.00	0.10	
1I	0	-2.198	1.933	0.553	0.000	0.484	-0.784	3	0.01	0.00	0.12	
1J	0	-2.198	2.857	0.553	0.000	0.484	-1.736	1	0.01	0.00	0.08	
1K	0	-2.198	1.933	-0.253	0.000	-0.213	-0.784	4	0.01	0.00	0.08	
1L	0	-2.198	2.857	-0.253	0.000	-0.213	-1.736	4	0.01	0.00	0.12	
1M	0	2.556	1.933	0.553	0.000	0.484	-0.784	3	0.01	0.01	0.12	
1N	0	2.556	2.857	0.553	0.000	0.484	-1.736	1	0.01	0.01	0.08	
1O	0	2.556	1.933	-0.253	0.000	-0.213	-0.784	4	0.01	0.01	0.07	
1P	0	2.556	2.857	-0.253	0.000	-0.213	-1.736	4	0.01	0.01	0.11	
2	0	0.416	4.753	0.289	0.000	0.259	-2.704	1	0.02	0.00	0.08	
7	0	-0.007	1.046	-0.443	0.000	-0.360	-0.216	4	0.00	0.00	0.07	
1A	55	-1.684	0.480	0.470	0.000	0.151	-0.104	3	0.00	0.00	0.03	
1B	55	-1.684	1.538	0.470	0.000	0.151	-0.561	3	0.01	0.00	0.05	
1C	55	-1.684	0.480	-0.169	0.000	-0.044	-0.104	4	0.00	0.00	0.02	
1D	55	-1.684	1.538	-0.169	0.000	-0.044	-0.561	4	0.01	0.00	0.04	
1E	55	2.041	0.480	0.470	0.000	0.151	-0.104	1	0.00	0.00	0.02	
1F	55	2.041	1.538	0.470	0.000	0.151	-0.561	3	0.01	0.00	0.05	
1G	55	2.041	0.480	-0.169	0.000	-0.044	-0.104	4	0.00	0.00	0.01	
1H	55	2.041	1.538	-0.169	0.000	-0.044	-0.561	4	0.01	0.00	0.03	
1I	55	-2.198	0.547	0.553	0.000	0.182	-0.125	3	0.00	0.00	0.04	
1J	55	-2.198	1.472	0.553	0.000	0.182	-0.540	3	0.00	0.00	0.06	
1K	55	-2.198	0.547	-0.253	0.000	-0.075	-0.125	4	0.00	0.00	0.03	
1L	55	-2.198	1.472	-0.253	0.000	-0.075	-0.540	4	0.00	0.00	0.04	
1M	55	2.556	0.547	0.553	0.000	0.182	-0.125	1	0.00	0.01	0.02	
1N	55	2.556	1.472	0.553	0.000	0.182	-0.540	3	0.00	0.01	0.06	
1O	55	2.556	0.547	-0.253	0.000	-0.075	-0.125	4	0.00	0.01	0.02	
1P	55	2.556	1.472	-0.253	0.000	-0.075	-0.540	4	0.00	0.01	0.04	
2	55	0.416	2.167	0.289	0.000	0.102	-0.818	1	0.01	0.00	0.03	
7	55	-0.007	0.095	-0.443	0.000	-0.119	0.095	4	0.00	0.00	0.03	
1A	109	-1.684	-0.905	0.470	0.000	-0.105	-0.240	4	0.00	0.00	0.03	
1B	109	-1.684	0.153	0.470	0.000	-0.105	-0.080	4	0.00	0.00	0.03	
1C	109	-1.684	-0.905	-0.169	0.000	0.049	-0.240	3	0.00	0.00	0.02	
1D	109	-1.684	0.153	-0.169	0.000	0.049	-0.080	3	0.00	0.00	0.01	
1E	109	2.041	-0.905	0.470	0.000	-0.105	-0.240	4	0.00	0.00	0.03	
1F	109	2.041	0.153	0.470	0.000	-0.105	-0.080	4	0.00	0.00	0.02	
1G	109	2.041	-0.905	-0.169	0.000	0.049	-0.240	3	0.00	0.00	0.02	
1H	109	2.041	0.153	-0.169	0.000	0.049	-0.080	3	0.00	0.00	0.01	
1I	109	-2.198	-0.839	0.553	0.000	-0.120	-0.220	4	0.00	0.00	0.04	
1J	109	-2.198	0.086	0.553	0.000	-0.120	-0.100	4	0.00	0.00	0.03	
1K	109	-2.198	-0.839	-0.253	0.000	0.063	-0.220	3	0.00	0.00	0.02	
1L	109	-2.198	0.086	-0.253	0.000	0.063	-0.100	3	0.00	0.00	0.02	
1M	109	2.556	-0.839	0.553	0.000	-0.120	-0.220	4	0.00	0.01	0.03	
1N	109	2.556	0.086	0.553	0.000	-0.120	-0.100	4	0.00	0.01	0.03	
1O	109	2.556	-0.839	-0.253	0.000	0.063	-0.220	3	0.00	0.01	0.02	
1P	109	2.556	0.086	-0.253	0.000	0.063	-0.100	3	0.00	0.01	0.02	
2	109	0.416	-0.419	0.289	0.000	-0.055	-0.342	4	0.00	0.00	0.02	
7	109	-0.007	-0.855	-0.443	0.000	0.123	-0.112	1	0.00	0.00	0.01	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-1.684	0.408	-0.723	4	0.6161	1.0001	1.0028	--	--	0.00	--	0.11	Snell.imin= 56
1B	-1.684	0.408	-1.797	4	0.6161	1.0001	1.0017	--	--	0.00	--	0.15	Snell.imin= 56
1C	-1.684	-0.137	-0.723	4	0.6161	0.9997	1.0028	--	--	0.00	--	0.06	Snell.imin= 56
1D	-1.684	-0.137	-1.797	4	0.6161	0.9997	1.0017	--	--	0.00	--	0.10	Snell.imin= 56
1E	2.041	0.408	-0.723	4	0.6161	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1F	2.041	0.408	-1.797	4	0.6161	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1G	2.041	-0.137	-0.723	4	0.6161	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1H	2.041	-0.137	-1.797	4	0.6161	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1I	-2.198	0.484	-0.784	4	0.6161	1.0002	1.0035	--	--	0.00	--	0.12	Snell.imin= 56
1J	-2.198	0.484	-1.736	4	0.6161	1.0002	1.0023	--	--	0.00	--	0.16	Snell.imin= 56
1K	-2.198	-0.213	-0.784	4	0.6161	0.9999	1.0035	--	--	0.00	--	0.07	Snell.imin= 56
1L	-2.198	-0.213	-1.736	4	0.6161	0.9999	1.0023	--	--	0.00	--	0.11	Snell.imin= 56
1M	2.556	0.484	-0.784	4	0.6161	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1N	2.556	0.484	-1.736	4	0.6161	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1O	2.556	-0.213	-0.784	4	0.6161	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1P	2.556	-0.213	-1.736	4	0.6161	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
2	0.416	0.259	-2.704	4	0.6161	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
7	-0.007	-0.360	-0.216	4	0.6161	1.0000	1.0000	--	--	0.00	--	0.07	Snell.imin= 56

ASTA NUM. 25 NI 107 NF 120 Lungh. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.

qy medio: 0.22 1.00 1.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
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## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

	cm	kN		kN*m							
1A	0	-5.073	0.928	0.155	0.000	0.097	-0.518	3	0.00	0.01	0.05
1B	0	-5.073	1.782	0.155	0.000	0.097	-1.204	3	0.01	0.01	0.07
1C	0	-5.073	0.928	-0.116	0.000	-0.007	-0.518	4	0.00	0.01	0.04
1D	0	-5.073	1.782	-0.116	0.000	-0.007	-1.204	4	0.01	0.01	0.07
1E	0	0.875	0.928	0.155	0.000	0.097	-0.518	1	0.00	0.00	0.02
1F	0	0.875	1.782	0.155	0.000	0.097	-1.204	1	0.01	0.00	0.04
1G	0	0.875	0.928	-0.116	0.000	-0.007	-0.518	1	0.00	0.00	0.01
1H	0	0.875	1.782	-0.116	0.000	-0.007	-1.204	1	0.01	0.00	0.03
1I	0	-6.284	0.813	0.160	0.000	0.087	-0.394	3	0.00	0.01	0.04
1J	0	-6.284	1.897	0.160	0.000	0.087	-1.328	3	0.01	0.01	0.08
1K	0	-6.284	0.813	-0.121	0.000	0.004	-0.394	4	0.00	0.01	0.03
1L	0	-6.284	1.897	-0.121	0.000	0.004	-1.328	4	0.01	0.01	0.07
1M	0	2.086	0.813	0.160	0.000	0.087	-0.394	3	0.00	0.00	0.03
1N	0	2.086	1.897	0.160	0.000	0.087	-1.328	1	0.01	0.00	0.04
1O	0	2.086	0.813	-0.121	0.000	0.004	-0.394	3	0.00	0.00	0.02
1P	0	2.086	1.897	-0.121	0.000	0.004	-1.328	1	0.01	0.00	0.03
2	0	-3.867	1.588	0.032	0.000	0.083	-1.076	3	0.01	0.01	0.06
7	0	-8.914	2.161	0.290	0.000	0.140	-1.397	3	0.01	0.01	0.09
1A	45	-5.073	0.380	0.155	0.000	0.025	-0.237	4	0.00	0.01	0.02
1B	45	-5.073	1.235	0.155	0.000	0.025	-0.512	4	0.00	0.01	0.04
1C	45	-5.073	0.380	-0.116	0.000	0.049	-0.237	3	0.00	0.01	0.03
1D	45	-5.073	1.235	-0.116	0.000	0.049	-0.512	3	0.00	0.01	0.04
1E	45	0.875	0.380	0.155	0.000	0.025	-0.237	3	0.00	0.00	0.02
1F	45	0.875	1.235	0.155	0.000	0.025	-0.512	1	0.00	0.00	0.01
1G	45	0.875	0.380	-0.116	0.000	0.049	-0.237	3	0.00	0.00	0.02
1H	45	0.875	1.235	-0.116	0.000	0.049	-0.512	1	0.00	0.00	0.02
1I	45	-6.284	0.265	0.160	0.000	0.012	-0.166	4	0.00	0.01	0.02
1J	45	-6.284	1.349	0.160	0.000	0.012	-0.583	4	0.00	0.01	0.04
1K	45	-6.284	0.265	-0.121	0.000	0.061	-0.166	3	0.00	0.01	0.03
1L	45	-6.284	1.349	-0.121	0.000	0.061	-0.583	3	0.00	0.01	0.04
1M	45	2.086	0.265	0.160	0.000	0.012	-0.166	3	0.00	0.00	0.01
1N	45	2.086	1.349	0.160	0.000	0.012	-0.583	3	0.00	0.00	0.03
1O	45	2.086	0.265	-0.121	0.000	0.061	-0.166	3	0.00	0.00	0.02
1P	45	2.086	1.349	-0.121	0.000	0.061	-0.583	3	0.00	0.00	0.04
2	45	-3.867	0.876	0.032	0.000	0.069	-0.521	3	0.00	0.01	0.04
7	45	-8.914	1.449	0.290	0.000	0.009	-0.585	4	0.00	0.02	0.05
1A	90	-5.073	-0.168	0.155	0.000	-0.048	-0.202	4	0.00	0.01	0.03
1B	90	-5.073	0.687	0.155	0.000	-0.048	-0.067	4	0.00	0.01	0.03
1C	90	-5.073	-0.168	-0.116	0.000	0.104	-0.202	3	0.00	0.01	0.03
1D	90	-5.073	0.687	-0.116	0.000	0.104	-0.067	4	0.00	0.01	0.02
1E	90	0.875	-0.168	0.155	0.000	-0.048	-0.202	4	0.00	0.00	0.02
1F	90	0.875	0.687	0.155	0.000	-0.048	-0.067	4	0.00	0.00	0.01
1G	90	0.875	-0.168	-0.116	0.000	0.104	-0.202	3	0.00	0.00	0.03
1H	90	0.875	0.687	-0.116	0.000	0.104	-0.067	3	0.00	0.00	0.02
1I	90	-6.284	-0.283	0.160	0.000	-0.063	-0.185	4	0.00	0.01	0.04
1J	90	-6.284	0.801	0.160	0.000	-0.063	-0.084	4	0.00	0.01	0.04
1K	90	-6.284	-0.283	-0.121	0.000	0.118	-0.185	3	0.00	0.01	0.04
1L	90	-6.284	0.801	-0.121	0.000	0.118	-0.084	4	0.00	0.01	0.03
1M	90	2.086	-0.283	0.160	0.000	-0.063	-0.185	4	0.00	0.00	0.02
1N	90	2.086	0.801	0.160	0.000	-0.063	-0.084	4	0.00	0.00	0.02
1O	90	2.086	-0.283	-0.121	0.000	0.118	-0.185	3	0.00	0.00	0.03
1P	90	2.086	0.801	-0.121	0.000	0.118	-0.084	1	0.00	0.00	0.01
2	90	-3.867	0.164	0.032	0.000	0.054	-0.287	3	0.00	0.01	0.03
7	90	-8.914	0.737	0.290	0.000	-0.122	-0.092	4	0.00	0.02	0.06

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γmin.	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	cm	kN	kN*m										
1A	-5.073	0.097	-0.518	4	0.6678	0.9971	1.0069	--	--	0.01	--	0.05	Snell.imin= 46
1B	-5.073	0.097	-1.204	4	0.6678	0.9971	1.0038	--	--	0.01	--	0.08	Snell.imin= 46
1C	-5.073	0.104	-0.518	4	0.6678	1.0031	1.0069	--	--	0.01	--	0.06	Snell.imin= 46
1D	-5.073	0.104	-1.204	4	0.6678	1.0031	1.0038	--	--	0.01	--	0.08	Snell.imin= 46
1E	0.875	0.097	-0.518	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1F	0.875	0.097	-1.204	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1G	0.875	0.104	-0.518	3	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1H	0.875	0.104	-1.204	3	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1I	-6.284	0.087	-0.394	4	0.6678	0.9927	1.0094	--	--	0.02	--	0.05	Snell.imin= 46
1J	-6.284	0.087	-1.328	4	0.6678	0.9927	1.0047	--	--	0.02	--	0.09	Snell.imin= 46
1K	-6.284	0.118	-0.394	4	0.6678	1.0054	1.0094	--	--	0.02	--	0.06	Snell.imin= 46
1L	-6.284	0.118	-1.328	4	0.6678	1.0054	1.0047	--	--	0.02	--	0.10	Snell.imin= 46
1M	2.086	0.087	-0.394	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1N	2.086	0.087	-1.328	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1O	2.086	0.118	-0.394	3	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1P	2.086	0.118	-1.328	3	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
2	-3.867	0.083	-1.076	3	0.6449	1.0084	1.0034	--	--	0.01	--	0.07	Snell.imin= 46
7	-8.914	0.140	-1.397	4	0.6678	0.9859	1.0066	--	--	0.02	--	0.11	Snell.imin= 46

**ASTA NUM. 26** NI 176 NF 81 Lunghezza 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y qy tot.

qy medio: 0.22 0.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-2.170	12.953	9.399	0.000	0.805	-7.953	1	0.07	0.00	0.25	
1B	0	-2.170	22.427	9.399	0.000	0.805	-10.721	1	0.07	0.00	0.31	
1C	0	-2.170	12.953	-0.593	0.000	-0.262	-7.953	4	0.04	0.00	0.38	
1D	0	-2.170	22.427	-0.593	0.000	-0.262	-10.721	4	0.07	0.00	0.50	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1E	0	3.460	12.953	9.399	0.000	0.805	-7.953	1	0.07	0.01	0.25
1F	0	3.460	22.427	9.399	0.000	0.805	-10.721	1	0.07	0.01	0.31
1G	0	3.460	12.953	-0.593	0.000	-0.262	-7.953	4	0.04	0.01	0.38
1H	0	3.460	22.427	-0.593	0.000	-0.262	-10.721	4	0.07	0.01	0.49
1I	0	-2.686	15.317	9.053	0.000	0.959	-7.390	1	0.07	0.00	0.25
1J	0	-2.686	20.063	9.053	0.000	0.959	-11.284	1	0.07	0.00	0.34
1K	0	-2.686	15.317	-0.247	0.000	-0.416	-7.390	4	0.05	0.00	0.39
1L	0	-2.686	20.063	-0.247	0.000	-0.416	-11.284	4	0.07	0.00	0.55
1M	0	3.975	15.317	9.053	0.000	0.959	-7.390	1	0.07	0.01	0.25
1N	0	3.975	20.063	9.053	0.000	0.959	-11.284	1	0.07	0.01	0.34
1O	0	3.975	15.317	-0.247	0.000	-0.416	-7.390	4	0.05	0.01	0.38
1P	0	3.975	20.063	-0.247	0.000	-0.416	-11.284	4	0.07	0.01	0.55
2	0	1.430	28.990	3.409	0.000	0.202	-17.130	1	0.10	0.00	0.42
7	0	-4.513	29.540	2.145	0.000	-0.184	-14.770	4	0.10	0.01	0.66
1A	5	-2.170	12.943	9.399	0.000	0.448	-7.041	1	0.07	0.00	0.20
1B	5	-2.170	22.417	9.399	0.000	0.448	-9.865	1	0.07	0.00	0.27
1C	5	-2.170	12.943	-0.593	0.000	-0.345	-7.041	4	0.04	0.00	0.36
1D	5	-2.170	22.417	-0.593	0.000	-0.345	-9.865	4	0.07	0.00	0.48
1E	5	3.460	12.943	9.399	0.000	0.448	-7.041	1	0.07	0.01	0.20
1F	5	3.460	22.417	9.399	0.000	0.448	-9.865	1	0.07	0.01	0.27
1G	5	3.460	12.943	-0.593	0.000	-0.345	-7.041	4	0.04	0.01	0.36
1H	5	3.460	22.417	-0.593	0.000	-0.345	-9.865	4	0.07	0.01	0.47
1I	5	-2.686	15.307	9.053	0.000	0.552	-6.521	1	0.07	0.00	0.20
1J	5	-2.686	20.053	9.053	0.000	0.552	-10.384	1	0.07	0.00	0.29
1K	5	-2.686	15.307	-0.247	0.000	-0.450	-6.521	4	0.05	0.00	0.36
1L	5	-2.686	20.053	-0.247	0.000	-0.450	-10.384	4	0.07	0.00	0.52
1M	5	3.975	15.307	9.053	0.000	0.552	-6.521	1	0.07	0.01	0.20
1N	5	3.975	20.053	9.053	0.000	0.552	-10.384	1	0.07	0.01	0.29
1O	5	3.975	15.307	-0.247	0.000	-0.450	-6.521	4	0.05	0.01	0.35
1P	5	3.975	20.053	-0.247	0.000	-0.450	-10.384	4	0.07	0.01	0.51
2	5	1.430	28.975	3.409	0.000	0.031	-15.685	1	0.10	0.00	0.37
7	5	-4.513	29.525	2.145	0.000	-0.291	-13.290	4	0.10	0.01	0.62
1A	10	-2.170	12.933	9.399	0.000	0.090	-6.129	1	0.07	0.00	0.15
1B	10	-2.170	22.407	9.399	0.000	0.090	-9.009	1	0.07	0.00	0.22
1C	10	-2.170	12.933	-0.593	0.000	-0.428	-6.129	4	0.04	0.00	0.34
1D	10	-2.170	22.407	-0.593	0.000	-0.428	-9.009	4	0.07	0.00	0.46
1E	10	3.460	12.933	9.399	0.000	0.090	-6.129	1	0.07	0.01	0.15
1F	10	3.460	22.407	9.399	0.000	0.090	-9.009	1	0.07	0.01	0.22
1G	10	3.460	12.933	-0.593	0.000	-0.428	-6.129	4	0.04	0.01	0.33
1H	10	3.460	22.407	-0.593	0.000	-0.428	-9.009	4	0.07	0.01	0.45
1I	10	-2.686	15.297	9.053	0.000	0.145	-5.653	1	0.07	0.00	0.15
1J	10	-2.686	20.043	9.053	0.000	0.145	-9.485	1	0.07	0.00	0.24
1K	10	-2.686	15.297	-0.247	0.000	-0.483	-5.653	4	0.05	0.00	0.33
1L	10	-2.686	20.043	-0.247	0.000	-0.483	-9.485	4	0.07	0.00	0.49
1M	10	3.975	15.297	9.053	0.000	0.145	-5.653	1	0.07	0.01	0.15
1N	10	3.975	20.043	9.053	0.000	0.145	-9.485	1	0.07	0.01	0.24
1O	10	3.975	15.297	-0.247	0.000	-0.483	-5.653	4	0.05	0.01	0.32
1P	10	3.975	20.043	-0.247	0.000	-0.483	-9.485	4	0.07	0.01	0.48
2	10	1.430	28.960	3.409	0.000	-0.139	-14.240	4	0.10	0.00	0.62
7	10	-4.513	29.510	2.145	0.000	-0.398	-11.810	4	0.10	0.01	0.57

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{\min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota	
--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	kN	kN*m	kN*m											
1A	-2.170	0.805	-7.953	1	0.8236	0.9969	0.9999	--	--	0.00	--	--	0.25 Snell.imin=	5
1B	-2.170	0.805	-10.721	1	0.8236	0.9969	1.0001	--	--	0.00	--	--	0.31 Snell.imin=	5
1C	-2.170	-0.428	-7.953	4	0.8258	1.0029	1.0032	--	--	0.00	--	--	0.41 Snell.imin=	5
1D	-2.170	-0.428	-10.721	4	0.8258	1.0029	1.0034	--	--	0.00	--	--	0.53 Snell.imin=	5
1E	3.460	0.805	-7.953	1	0.8258	0.0000	0.0000	--	--	--	--	--	-- Snell.imin=	5
1F	3.460	0.805	-10.721	1	0.8258	0.0000	0.0000	--	--	--	--	--	-- Snell.imin=	5
1G	3.460	-0.428	-7.953	4	0.8258	0.0000	0.0000	--	--	--	--	--	-- Snell.imin=	5
1H	3.460	-0.428	-10.721	4	0.8258	0.0000	0.0000	--	--	--	--	--	-- Snell.imin=	5
1I	-2.686	0.959	-7.390	1	0.8236	0.9962	0.9999	--	--	0.00	--	--	0.25 Snell.imin=	5
1J	-2.686	0.959	-11.284	1	0.8236	0.9962	1.0001	--	--	0.00	--	--	0.34 Snell.imin=	5
1K	-2.686	-0.483	-7.390	4	0.8258	1.0045	1.0039	--	--	0.01	--	--	0.40 Snell.imin=	5
1L	-2.686	-0.483	-11.284	4	0.8258	1.0045	1.0042	--	--	0.01	--	--	0.56 Snell.imin=	5
1M	3.975	0.959	-7.390	1	0.8258	0.0000	0.0000	--	--	--	--	--	-- Snell.imin=	5
1N	3.975	0.959	-11.284	1	0.8258	0.0000	0.0000	--	--	--	--	--	-- Snell.imin=	5
1O	3.975	-0.483	-7.390	4	0.8258	0.0000	0.0000	--	--	--	--	--	-- Snell.imin=	5
1P	3.975	-0.483	-11.284	4	0.8258	0.0000	0.0000	--	--	--	--	--	-- Snell.imin=	5
2	1.430	0.202	-17.130	4	0.8258	0.0000	0.0000	--	--	--	--	--	-- Snell.imin=	5
7	-4.513	-0.398	-14.770	4	0.8258	1.0049	1.0068	--	--	0.01	--	--	0.70 Snell.imin=	5

ASTA NUM. 27 NI 81 NF 80 Lunghe. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y qy tot.  
qy medio: 0.22 0.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN	kN	kN	kN*m	kN*m	kN*m					
1A	0	-1.086	6.952	0.392	0.000	0.165	-5.994	1	0.02	0.00	0.15	
1B	0	-1.086	10.450	0.392	0.000	0.165	-8.952	1	0.03	0.00	0.22	
1C	0	-1.086	6.952	-0.229	0.000	-0.163	-5.994	4	0.02	0.00	0.28	
1D	0	-1.086	10.450	-0.229	0.000	-0.163	-8.952	4	0.03	0.00	0.40	
1E	0	1.692	6.952	0.392	0.000	0.165	-5.994	1	0.02	0.00	0.15	
1F	0	1.692	10.450	0.392	0.000	0.165	-8.952	1	0.03	0.00	0.22	
1G	0	1.692	6.952	-0.229	0.000	-0.163	-5.994	4	0.02	0.00	0.28	
1H	0	1.692	10.450	-0.229	0.000	-0.163	-8.952	4	0.03	0.00	0.40	
1I	0	-1.330	6.073	0.528	0.000	0.199	-5.372	1	0.02	0.00	0.14	
1J	0	-1.330	11.330	0.528	0.000	0.199	-9.574	1	0.04	0.00	0.24	
1K	0	-1.330	6.073	-0.364	0.000	-0.196	-5.372	4	0.02	0.00	0.26	
1L	0	-1.330	11.330	-0.364	0.000	-0.196	-9.574	4	0.04	0.00	0.43	

**Relazione di calcolo delle opere strutturali**

**Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10**

1M	0	1.936	6.073	0.528	0.000	0.199	-5.372	1	0.02	0.00	0.14
1N	0	1.936	11.330	0.528	0.000	0.199	-9.574	1	0.04	0.00	0.24
1O	0	1.936	6.073	-0.364	0.000	-0.196	-5.372	4	0.02	0.00	0.26
1P	0	1.936	11.330	-0.364	0.000	-0.196	-9.574	4	0.04	0.00	0.43
2	0	0.649	16.290	0.269	0.000	0.085	-14.050	1	0.05	0.00	0.33
7	0	-2.374	14.030	0.450	0.000	0.116	-11.860	1	0.05	0.00	0.29
1A	45	-1.086	6.854	0.392	0.000	-0.015	-2.917	4	0.02	0.00	0.13
1B	45	-1.086	10.352	0.392	0.000	-0.015	-4.242	4	0.03	0.00	0.18
1C	45	-1.086	6.854	-0.229	0.000	-0.057	-2.917	4	0.02	0.00	0.13
1D	45	-1.086	10.352	-0.229	0.000	-0.057	-4.242	4	0.03	0.00	0.19
1E	45	1.692	6.854	0.392	0.000	-0.015	-2.917	4	0.02	0.00	0.13
1F	45	1.692	10.352	0.392	0.000	-0.015	-4.242	4	0.03	0.00	0.18
1G	45	1.692	6.854	-0.229	0.000	-0.057	-2.917	4	0.02	0.00	0.13
1H	45	1.692	10.352	-0.229	0.000	-0.057	-4.242	4	0.03	0.00	0.19
1I	45	-1.330	5.975	0.528	0.000	-0.046	-2.681	4	0.02	0.00	0.12
1J	45	-1.330	11.232	0.528	0.000	-0.046	-4.478	4	0.04	0.00	0.20
1K	45	-1.330	5.975	-0.364	0.000	-0.026	-2.681	4	0.02	0.00	0.12
1L	45	-1.330	11.232	-0.364	0.000	-0.026	-4.478	4	0.04	0.00	0.19
1M	45	1.936	5.975	0.528	0.000	-0.046	-2.681	4	0.02	0.00	0.12
1N	45	1.936	11.232	0.528	0.000	-0.046	-4.478	4	0.04	0.00	0.20
1O	45	1.936	5.975	-0.364	0.000	-0.026	-2.681	4	0.02	0.00	0.12
1P	45	1.936	11.232	-0.364	0.000	-0.026	-4.478	4	0.04	0.00	0.19
2	45	0.649	16.160	0.269	0.000	-0.036	-6.748	4	0.05	0.00	0.29
7	45	-2.374	13.900	0.450	0.000	-0.087	-5.574	4	0.05	0.00	0.25
1A	90	-1.086	6.756	0.392	0.000	-0.195	0.116	4	0.02	0.00	0.04
1B	90	-1.086	10.254	0.392	0.000	-0.195	0.423	4	0.03	0.00	0.06
1C	90	-1.086	6.756	-0.229	0.000	0.050	0.116	4	0.02	0.00	0.01
1D	90	-1.086	10.254	-0.229	0.000	0.050	0.423	1	0.03	0.00	0.01
1E	90	1.692	6.756	0.392	0.000	-0.195	0.116	4	0.02	0.00	0.04
1F	90	1.692	10.254	0.392	0.000	-0.195	0.423	4	0.03	0.00	0.06
1G	90	1.692	6.756	-0.229	0.000	0.050	0.116	3	0.02	0.00	0.02
1H	90	1.692	10.254	-0.229	0.000	0.050	0.423	1	0.03	0.00	0.02
1I	90	-1.330	5.877	0.528	0.000	-0.290	-0.035	4	0.02	0.00	0.06
1J	90	-1.330	11.134	0.528	0.000	-0.290	0.574	4	0.04	0.00	0.09
1K	90	-1.330	5.877	-0.364	0.000	0.145	-0.035	3	0.02	0.00	0.03
1L	90	-1.330	11.134	-0.364	0.000	0.145	0.574	1	0.04	0.00	0.03
1M	90	1.936	5.877	0.528	0.000	-0.290	-0.035	4	0.02	0.00	0.06
1N	90	1.936	11.134	0.528	0.000	-0.290	0.574	4	0.04	0.00	0.09
1O	90	1.936	5.877	-0.364	0.000	0.145	-0.035	1	0.02	0.00	0.01
1P	90	1.936	11.134	-0.364	0.000	0.145	0.574	1	0.04	0.00	0.03
2	90	0.649	16.030	0.269	0.000	-0.157	0.496	4	0.05	0.00	0.06
7	90	-2.374	13.770	0.450	0.000	-0.290	0.655	4	0.05	0.00	0.09

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
--	kN	kN*m	kN*m	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1A	-1.086	-0.195	-5.994	4	0.6678	0.9983	1.0006	--	--	0.00	--	0.41	Snell.imin= 46
1B	-1.086	-0.195	-8.952	4	0.6678	0.9983	1.0005	--	--	0.00	--	0.59	Snell.imin= 46
1C	-1.086	-0.163	-5.994	4	0.6678	0.9999	1.0006	--	--	0.00	--	0.40	Snell.imin= 46
1D	-1.086	-0.163	-8.952	4	0.6678	0.9999	1.0005	--	--	0.00	--	0.59	Snell.imin= 46
1E	1.692	-0.195	-5.994	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1F	1.692	-0.195	-8.952	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1G	1.692	-0.163	-5.994	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1H	1.692	-0.163	-8.952	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1I	-1.330	-0.290	-5.372	4	0.6678	0.9986	1.0007	--	--	0.00	--	0.39	Snell.imin= 46
1J	-1.330	-0.290	-9.574	4	0.6678	0.9986	1.0006	--	--	0.00	--	0.65	Snell.imin= 46
1K	-1.330	-0.196	-5.372	4	0.6678	0.9984	1.0007	--	--	0.00	--	0.37	Snell.imin= 46
1L	-1.330	-0.196	-9.574	4	0.6678	0.9984	1.0006	--	--	0.00	--	0.63	Snell.imin= 46
1M	1.936	-0.290	-5.372	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1N	1.936	-0.290	-9.574	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1O	1.936	-0.196	-5.372	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1P	1.936	-0.196	-9.574	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
2	0.649	-0.157	-14.050	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
7	-2.374	-0.290	-11.860	4	0.6678	0.9993	1.0010	--	--	0.01	--	0.79	Snell.imin= 46

**ASTA NUM. 28** NI 130 NF 176 Lungh. 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y qy tot.  
qy medio: 0.22 0.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
--	cm	kN	kN	kN	kN*m	kN*m	kN*m	-----	-----	-----	-----	-----
1A	0	-1.882	-25.297	12.129	0.000	0.511	-5.603	1	0.09	0.00	0.17	
1B	0	-1.882	-18.903	12.129	0.000	0.511	-8.341	1	0.09	0.00	0.23	
1C	0	-1.882	-25.297	2.231	0.000	-0.224	-5.603	4	0.08	0.00	0.28	
1D	0	-1.882	-18.903	2.231	0.000	-0.224	-8.341	4	0.06	0.00	0.39	
1E	0	2.476	-25.297	12.129	0.000	0.511	-5.603	1	0.09	0.01	0.17	
1F	0	2.476	-18.903	12.129	0.000	0.511	-8.341	1	0.09	0.01	0.24	
1G	0	2.476	-25.297	2.231	0.000	-0.224	-5.603	4	0.08	0.01	0.27	
1H	0	2.476	-18.903	2.231	0.000	-0.224	-8.341	4	0.06	0.01	0.39	
1I	0	-1.898	-23.805	11.464	0.000	0.520	-5.280	1	0.08	0.00	0.16	
1J	0	-1.898	-20.395	11.464	0.000	0.520	-8.664	1	0.08	0.00	0.24	
1K	0	-1.898	-23.805	2.896	0.000	-0.233	-5.280	4	0.08	0.00	0.27	
1L	0	-1.898	-20.395	2.896	0.000	-0.233	-8.664	4	0.07	0.00	0.41	
1M	0	2.493	-23.805	11.464	0.000	0.520	-5.280	1	0.08	0.01	0.16	
1N	0	2.493	-20.395	11.464	0.000	0.520	-8.664	1	0.08	0.01	0.24	
1O	0	2.493	-23.805	2.896	0.000	-0.233	-5.280	4	0.08	0.01	0.26	
1P	0	2.493	-20.395	2.896	0.000	-0.233	-8.664	4	0.07	0.01	0.40	
2	0	0.563	-40.790	13.990	0.000	0.218	-12.830	1	0.13	0.00	0.32	
7	0	-4.280	-21.780	10.080	0.000	-0.391	-8.530	4	0.07	0.01	0.44	
1A	5	-1.882	-25.307	12.129	0.000	-0.236	-6.701	4	0.09	0.00	0.32	

Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1B	5	-1.882	-18.913	12.129	0.000	-0.236	-9.454	4	0.09	0.00	0.44	
1C	5	-1.882	-25.307	2.231	0.000	-0.195	-6.701	4	0.08	0.00	0.32	
1D	5	-1.882	-18.913	2.231	0.000	-0.195	-9.454	4	0.06	0.00	0.43	
1E	5	2.476	-25.307	12.129	0.000	-0.236	-6.701	4	0.09	0.01	0.32	
1F	5	2.476	-18.913	12.129	0.000	-0.236	-9.454	4	0.09	0.01	0.44	
1G	5	2.476	-25.307	2.231	0.000	-0.195	-6.701	4	0.08	0.01	0.31	
1H	5	2.476	-18.913	2.231	0.000	-0.195	-9.454	4	0.06	0.01	0.43	
1I	5	-1.898	-23.815	11.464	0.000	0.216	-6.386	1	0.08	0.00	0.17	
1J	5	-1.898	-20.405	11.464	0.000	0.216	-9.769	1	0.08	0.00	0.25	
1K	5	-1.898	-23.815	2.896	0.000	-0.646	-6.386	4	0.08	0.00	0.38	
1L	5	-1.898	-20.405	2.896	0.000	-0.646	-9.769	4	0.07	0.00	0.52	
1M	5	2.493	-23.815	11.464	0.000	0.216	-6.386	1	0.08	0.01	0.17	
1N	5	2.493	-20.405	11.464	0.000	0.216	-9.769	1	0.08	0.01	0.25	
1O	5	2.493	-23.815	2.896	0.000	-0.646	-6.386	4	0.08	0.01	0.38	
1P	5	2.493	-20.405	2.896	0.000	-0.646	-9.769	4	0.07	0.01	0.52	
2	5	0.563	-40.805	13.990	0.000	-0.481	-14.875	4	0.13	0.00	0.70	
7	5	-4.280	-21.795	10.080	0.000	-0.895	-9.620	4	0.07	0.01	0.57	
1A	10	-1.882	-25.317	12.129	0.000	-0.983	-7.799	4	0.09	0.00	0.50	
1B	10	-1.882	-18.923	12.129	0.000	-0.983	-10.567	4	0.09	0.00	0.62	
1C	10	-1.882	-25.317	2.231	0.000	-0.166	-7.799	4	0.08	0.00	0.36	
1D	10	-1.882	-18.923	2.231	0.000	-0.166	-10.567	4	0.06	0.00	0.47	
1E	10	2.476	-25.317	12.129	0.000	-0.983	-7.799	4	0.09	0.01	0.50	
1F	10	2.476	-18.923	12.129	0.000	-0.983	-10.567	4	0.09	0.01	0.61	
1G	10	2.476	-25.317	2.231	0.000	-0.166	-7.799	4	0.08	0.01	0.35	
1H	10	2.476	-18.923	2.231	0.000	-0.166	-10.567	4	0.06	0.01	0.47	
1I	10	-1.898	-23.825	11.464	0.000	-0.089	-7.492	4	0.08	0.00	0.33	
1J	10	-1.898	-20.415	11.464	0.000	-0.089	-10.874	4	0.08	0.00	0.47	
1K	10	-1.898	-23.825	2.896	0.000	-1.059	-7.492	4	0.08	0.00	0.50	
1L	10	-1.898	-20.415	2.896	0.000	-1.059	-10.874	4	0.07	0.00	0.64	
1M	10	2.493	-23.825	11.464	0.000	-0.089	-7.492	4	0.08	0.01	0.33	
1N	10	2.493	-20.415	11.464	0.000	-0.089	-10.874	4	0.08	0.01	0.47	
1O	10	2.493	-23.825	2.896	0.000	-1.059	-7.492	4	0.08	0.01	0.50	
1P	10	2.493	-20.415	2.896	0.000	-1.059	-10.874	4	0.07	0.01	0.64	
2	10	0.563	-40.820	13.990	0.000	-1.181	-16.920	4	0.13	0.00	0.91	
7	10	-4.280	-21.810	10.080	0.000	-1.399	-10.710	4	0.07	0.01	0.70	

Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx -- kN	My ----- kN*m	Mz ----- kN*m	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
1A	-1.882	-0.983	-7.799	4	0.8258	0.9994	1.0026	--	--	0.00	--	0.50	Snell.imin= 5
1B	-1.882	-0.983	-10.567	4	0.8258	0.9994	1.0028	--	--	0.00	--	0.62	Snell.imin= 5
1C	-1.882	-0.224	-7.799	4	0.8258	1.0028	1.0026	--	--	0.00	--	0.37	Snell.imin= 5
1D	-1.882	-0.224	-10.567	4	0.8258	1.0028	1.0028	--	--	0.00	--	0.48	Snell.imin= 5
1E	2.476	-0.983	-7.799	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1F	2.476	-0.983	-10.567	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1G	2.476	-0.224	-7.799	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1H	2.476	-0.224	-10.567	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1I	-1.898	0.520	-7.492	4	0.8258	1.0003	1.0026	--	--	0.00	--	0.41	Snell.imin= 5
1J	-1.898	0.520	-10.874	4	0.8258	1.0003	1.0029	--	--	0.00	--	0.55	Snell.imin= 5
1K	-1.898	-1.059	-7.492	4	0.8258	1.0014	1.0026	--	--	0.00	--	0.50	Snell.imin= 5
1L	-1.898	-1.059	-10.874	4	0.8258	1.0014	1.0029	--	--	0.00	--	0.64	Snell.imin= 5
1M	2.493	0.520	-7.492	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1N	2.493	0.520	-10.874	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1O	2.493	-1.059	-7.492	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1P	2.493	-1.059	-10.874	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
2	0.563	-1.181	-16.920	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
7	-4.280	-1.399	-10.710	4	0.8258	1.0036	1.0065	--	--	0.01	--	0.71	Snell.imin= 5

ASTA NUM. 29 NI 151 NF 130 Lungh. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y qy tot.  
qy medio: 0.22 0.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici ≤ 1 : VERIFICATO

NC	x -- cm	Fx ----- kN	Fy ----- kN	Fz ----- kN	Mx ----- kN*m	My ----- kN*m	Mz ----- kN*m	Classe	I.V.T.	I.R.n.	I.R.	Nota
1A	0	-0.671	-9.837	0.970	0.000	0.561	0.767	1	0.03	0.00	0.06	
1B	0	-0.671	-6.037	0.970	0.000	0.561	0.033	4	0.02	0.00	0.03	
1C	0	-0.671	-9.837	-0.596	0.000	-0.220	0.767	4	0.03	0.00	0.09	
1D	0	-0.671	-6.037	-0.596	0.000	-0.220	0.033	4	0.02	0.00	0.04	
1E	0	1.530	-9.837	0.970	0.000	0.561	0.767	1	0.03	0.00	0.06	
1F	0	1.530	-6.037	0.970	0.000	0.561	0.033	3	0.02	0.00	0.10	
1G	0	1.530	-9.837	-0.596	0.000	-0.220	0.767	4	0.03	0.00	0.09	
1H	0	1.530	-6.037	-0.596	0.000	-0.220	0.033	4	0.02	0.00	0.04	
1I	0	-0.587	-10.489	1.331	0.000	0.737	0.905	1	0.03	0.00	0.08	
1J	0	-0.587	-5.385	1.331	0.000	0.737	-0.105	3	0.02	0.00	0.13	
1K	0	-0.587	-10.489	-0.958	0.000	-0.396	0.905	4	0.03	0.00	0.13	
1L	0	-0.587	-5.385	-0.958	0.000	-0.396	-0.105	4	0.02	0.00	0.08	
1M	0	1.445	-10.489	1.331	0.000	0.737	0.905	1	0.03	0.00	0.08	
1N	0	1.445	-5.385	1.331	0.000	0.737	-0.105	3	0.02	0.00	0.14	
1O	0	1.445	-10.489	-0.958	0.000	-0.396	0.905	4	0.03	0.00	0.13	
1P	0	1.445	-5.385	-0.958	0.000	-0.396	-0.105	4	0.02	0.00	0.08	
2	0	0.812	-14.700	0.394	0.000	0.332	0.753	1	0.05	0.00	0.04	
7	0	-1.944	-8.125	-1.350	0.000	-0.595	-0.180	4	0.03	0.00	0.12	
1A	45	-0.671	-9.935	0.970	0.000	0.122	-3.744	1	0.03	0.00	0.10	
1B	45	-0.671	-6.134	0.970	0.000	0.122	-2.644	1	0.02	0.00	0.07	
1C	45	-0.671	-9.935	-0.596	0.000	0.051	-3.744	1	0.03	0.00	0.09	
1D	45	-0.671	-6.134	-0.596	0.000	0.051	-2.644	1	0.02	0.00	0.07	
1E	45	1.530	-9.935	0.970	0.000	0.122	-3.744	1	0.03	0.00	0.10	
1F	45	1.530	-6.134	0.970	0.000	0.122	-2.644	1	0.02	0.00	0.07	
1G	45	1.530	-9.935	-0.596	0.000	0.051	-3.744	1	0.03	0.00	0.09	
1H	45	1.530	-6.134	-0.596	0.000	0.051	-2.644	1	0.02	0.00	0.07	
1I	45	-0.587	-10.587	1.331	0.000	0.136	-3.899	1	0.04	0.00	0.10	



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1J	45	-0.587	-5.482	1.331	0.000	0.136	-2.488	1	0.02	0.00	0.07	
1K	45	-0.587	-10.587	-0.958	0.000	0.037	-3.899	1	0.04	0.00	0.09	
1L	45	-0.587	-5.482	-0.958	0.000	0.037	-2.488	1	0.02	0.00	0.06	
1M	45	1.445	-10.587	1.331	0.000	0.136	-3.899	1	0.04	0.00	0.10	
1N	45	1.445	-5.482	1.331	0.000	0.136	-2.488	1	0.02	0.00	0.07	
1O	45	1.445	-10.587	-0.958	0.000	0.037	-3.899	1	0.04	0.00	0.10	
1P	45	1.445	-5.482	-0.958	0.000	0.037	-2.488	1	0.02	0.00	0.06	
2	45	0.812	-14.830	0.394	0.000	0.154	-5.890	1	0.05	0.00	0.15	
7	45	-1.944	-8.252	-1.350	0.000	0.013	-3.865	4	0.03	0.00	0.17	
1A	90	-0.671	-10.032	0.970	0.000	-0.317	-8.298	4	0.03	0.00	0.40	
1B	90	-0.671	-6.232	0.970	0.000	-0.317	-5.364	4	0.02	0.00	0.28	
1C	90	-0.671	-10.032	-0.596	0.000	0.322	-8.298	1	0.03	0.00	0.22	
1D	90	-0.671	-6.232	-0.596	0.000	0.322	-5.364	1	0.02	0.00	0.15	
1E	90	1.530	-10.032	0.970	0.000	-0.317	-8.298	4	0.03	0.00	0.40	
1F	90	1.530	-6.232	0.970	0.000	-0.317	-5.364	4	0.02	0.00	0.28	
1G	90	1.530	-10.032	-0.596	0.000	0.322	-8.298	1	0.03	0.00	0.22	
1H	90	1.530	-6.232	-0.596	0.000	0.322	-5.364	1	0.02	0.00	0.15	
1I	90	-0.587	-10.684	1.331	0.000	-0.465	-8.748	4	0.04	0.00	0.45	
1J	90	-0.587	-5.580	1.331	0.000	-0.465	-4.914	4	0.02	0.00	0.29	
1K	90	-0.587	-10.684	-0.958	0.000	0.469	-8.748	1	0.04	0.00	0.24	
1L	90	-0.587	-5.580	-0.958	0.000	0.469	-4.914	1	0.02	0.00	0.15	
1M	90	1.445	-10.684	1.331	0.000	-0.465	-8.748	4	0.04	0.00	0.45	
1N	90	1.445	-5.580	1.331	0.000	-0.465	-4.914	4	0.02	0.00	0.29	
1O	90	1.445	-10.684	-0.958	0.000	0.469	-8.748	1	0.04	0.00	0.24	
1P	90	1.445	-5.580	-0.958	0.000	0.469	-4.914	1	0.02	0.00	0.15	
2	90	0.812	-14.960	0.394	0.000	-0.023	-12.590	4	0.05	0.00	0.53	
7	90	-1.944	-8.379	-1.350	0.000	0.621	-7.607	1	0.03	0.00	0.23	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\chi_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-0.671	0.561	-8.298	4	0.6449	0.9996	1.0002	--	--	0.00	--	0.44	Snell.imin= 46
1B	-0.671	0.561	-5.364	4	0.6449	0.9996	1.0003	--	--	0.00	--	0.32	Snell.imin= 46
1C	-0.671	0.322	-8.298	4	0.6449	0.9994	1.0002	--	--	0.00	--	0.40	Snell.imin= 46
1D	-0.671	0.322	-5.364	4	0.6449	0.9994	1.0003	--	--	0.00	--	0.28	Snell.imin= 46
1E	1.530	0.561	-8.298	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1F	1.530	0.561	-5.364	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1G	1.530	0.322	-8.298	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1H	1.530	0.322	-5.364	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1I	-0.587	0.737	-8.748	4	0.6449	0.9995	1.0002	--	--	0.00	--	0.49	Snell.imin= 46
1J	-0.587	0.737	-4.914	4	0.6449	0.9995	1.0003	--	--	0.00	--	0.33	Snell.imin= 46
1K	-0.587	0.469	-8.748	4	0.6449	0.9992	1.0002	--	--	0.00	--	0.45	Snell.imin= 46
1L	-0.587	0.469	-4.914	4	0.6449	0.9992	1.0003	--	--	0.00	--	0.29	Snell.imin= 46
1M	1.445	0.737	-8.748	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1N	1.445	0.737	-4.914	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1O	1.445	0.469	-8.748	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1P	1.445	0.469	-4.914	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
2	0.812	0.332	-12.590	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
7	-1.944	0.621	-7.607	4	0.6449	0.9970	1.0009	--	--	0.00	--	0.43	Snell.imin= 46

ASTA NUM. 30 NI 129 NF 150 Lungh. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y qy tot.

qy medio: 0.22 0.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-2.123	4.646	1.257	0.000	0.471	-4.068	1	0.02	0.00	0.13	
1B	0	-2.123	9.178	1.257	0.000	0.471	-7.576	1	0.03	0.00	0.21	
1C	0	-2.123	4.646	-0.593	0.000	-0.261	-4.068	4	0.02	0.00	0.22	
1D	0	-2.123	9.178	-0.593	0.000	-0.261	-7.576	4	0.03	0.00	0.37	
1E	0	0.893	4.646	1.257	0.000	0.471	-4.068	1	0.02	0.00	0.13	
1F	0	0.893	9.178	1.257	0.000	0.471	-7.576	1	0.03	0.00	0.21	
1G	0	0.893	4.646	-0.593	0.000	-0.261	-4.068	4	0.02	0.00	0.22	
1H	0	0.893	9.178	-0.593	0.000	-0.261	-7.576	4	0.03	0.00	0.36	
1I	0	-1.644	3.666	1.543	0.000	0.581	-3.318	1	0.01	0.00	0.12	
1J	0	-1.644	10.158	1.543	0.000	0.581	-8.326	1	0.03	0.00	0.24	
1K	0	-1.644	3.666	-0.879	0.000	-0.371	-3.318	4	0.01	0.00	0.21	
1L	0	-1.644	10.158	-0.879	0.000	-0.371	-8.326	4	0.03	0.00	0.42	
1M	0	0.414	3.666	1.543	0.000	0.581	-3.318	1	0.01	0.00	0.12	
1N	0	0.414	10.158	1.543	0.000	0.581	-8.326	1	0.03	0.00	0.24	
1O	0	0.414	3.666	-0.879	0.000	-0.371	-3.318	4	0.01	0.00	0.20	
1P	0	0.414	10.158	-0.879	0.000	-0.371	-8.326	4	0.03	0.00	0.41	
2	0	-1.225	13.060	0.627	0.000	0.197	-11.020	1	0.04	0.00	0.27	
7	0	1.500	3.040	-1.353	0.000	-0.577	-3.171	4	0.01	0.00	0.23	
1A	45	-2.123	4.549	1.257	0.000	-0.096	-2.063	4	0.02	0.00	0.11	
1B	45	-2.123	9.081	1.257	0.000	-0.096	-3.403	4	0.03	0.00	0.16	
1C	45	-2.123	4.549	-0.593	0.000	0.007	-2.063	4	0.02	0.00	0.09	
1D	45	-2.123	9.081	-0.593	0.000	0.007	-3.403	4	0.03	0.00	0.15	
1E	45	0.893	4.549	1.257	0.000	-0.096	-2.063	4	0.02	0.00	0.10	
1F	45	0.893	9.081	1.257	0.000	-0.096	-3.403	4	0.03	0.00	0.16	
1G	45	0.893	4.549	-0.593	0.000	0.007	-2.063	1	0.02	0.00	0.05	
1H	45	0.893	9.081	-0.593	0.000	0.007	-3.403	1	0.03	0.00	0.08	
1I	45	-1.644	3.569	1.543	0.000	-0.115	-1.750	4	0.01	0.00	0.10	
1J	45	-1.644	10.061	1.543	0.000	-0.115	-3.716	4	0.03	0.00	0.18	
1K	45	-1.644	3.569	-0.879	0.000	0.026	-1.750	1	0.01	0.00	0.04	
1L	45	-1.644	10.061	-0.879	0.000	0.026	-3.716	1	0.03	0.00	0.09	
1M	45	0.414	3.569	1.543	0.000	-0.115	-1.750	4	0.01	0.00	0.09	
1N	45	0.414	10.061	1.543	0.000	-0.115	-3.716	4	0.03	0.00	0.17	
1O	45	0.414	3.569	-0.879	0.000	0.026	-1.750	1	0.01	0.00	0.04	
1P	45	0.414	10.061	-0.879	0.000	0.026	-3.716	1	0.03	0.00	0.09	
2	45	-1.225	12.935	0.627	0.000	-0.086	-5.171	4	0.04	0.00	0.23	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

7	45	1.500	2.913	-1.353	0.000	0.032	-1.831	1	0.01	0.00	0.05
1A	90	-2.123	4.451	1.257	0.000	-0.662	-0.102	4	0.01	0.00	0.13
1B	90	-2.123	8.983	1.257	0.000	-0.662	0.725	4	0.03	0.00	0.16
1C	90	-2.123	4.451	-0.593	0.000	0.274	-0.102	3	0.01	0.00	0.06
1D	90	-2.123	8.983	-0.593	0.000	0.274	0.725	1	0.03	0.00	0.04
1E	90	0.893	4.451	1.257	0.000	-0.662	-0.102	4	0.01	0.00	0.12
1F	90	0.893	8.983	1.257	0.000	-0.662	0.725	4	0.03	0.00	0.16
1G	90	0.893	4.451	-0.593	0.000	0.274	-0.102	3	0.01	0.00	0.05
1H	90	0.893	8.983	-0.593	0.000	0.274	0.725	1	0.03	0.00	0.04
1I	90	-1.644	3.471	1.543	0.000	-0.810	-0.226	4	0.01	0.00	0.16
1J	90	-1.644	9.963	1.543	0.000	-0.810	0.849	4	0.03	0.00	0.20
1K	90	-1.644	3.471	-0.879	0.000	0.422	-0.226	3	0.01	0.00	0.09
1L	90	-1.644	9.963	-0.879	0.000	0.422	0.849	1	0.03	0.00	0.05
1M	90	0.414	3.471	1.543	0.000	-0.810	-0.226	4	0.01	0.00	0.15
1N	90	0.414	9.963	1.543	0.000	-0.810	0.849	4	0.03	0.00	0.20
1O	90	0.414	3.471	-0.879	0.000	0.422	-0.226	1	0.01	0.00	0.04
1P	90	0.414	9.963	-0.879	0.000	0.422	0.849	1	0.03	0.00	0.05
2	90	-1.225	12.810	0.627	0.000	-0.368	0.622	4	0.04	0.00	0.10
7	90	1.500	2.786	-1.353	0.000	0.641	-0.549	1	0.01	0.00	0.06

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-2.123	-0.662	-4.068	4	0.6678	0.9976	1.0013	--	--	0.01	--	0.38	Snell.imin= 46
1B	-2.123	-0.662	-7.576	4	0.6678	0.9976	1.0008	--	--	0.01	--	0.59	Snell.imin= 46
1C	-2.123	0.274	-4.068	4	0.6678	0.9962	1.0013	--	--	0.01	--	0.31	Snell.imin= 46
1D	-2.123	0.274	-7.576	4	0.6678	0.9962	1.0008	--	--	0.01	--	0.52	Snell.imin= 46
1E	0.893	-0.662	-4.068	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1F	0.893	-0.662	-7.576	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1G	0.893	0.274	-4.068	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1H	0.893	0.274	-7.576	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1I	-1.644	-0.810	-3.318	4	0.6678	0.9981	1.0011	--	--	0.00	--	0.35	Snell.imin= 46
1J	-1.644	-0.810	-8.326	4	0.6678	0.9981	1.0006	--	--	0.00	--	0.66	Snell.imin= 46
1K	-1.644	0.422	-3.318	4	0.6678	0.9974	1.0011	--	--	0.00	--	0.28	Snell.imin= 46
1L	-1.644	0.422	-8.326	4	0.6678	0.9974	1.0006	--	--	0.00	--	0.59	Snell.imin= 46
1M	0.414	-0.810	-3.318	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1N	0.414	-0.810	-8.326	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1O	0.414	0.422	-3.318	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1P	0.414	0.422	-8.326	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
2	-1.225	-0.368	-11.020	4	0.6678	0.9992	1.0005	--	--	0.00	--	0.75	Snell.imin= 46
7	1.500	0.641	-3.171	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46

**ASTA NUM. 31** NI 2 NF 121 Lungh. 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y qy tot.  
qy medio: 0.22 0.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota	
	cm	kN			kN*m								
1A	0	-1.710	-14.829	-4.784	0.000	0.178	-3.819	1	0.05	0.00	0.10		
1B	0	-1.710	-3.893	-4.784	0.000	0.178	-6.061	1	0.04	0.00	0.16		
1C	0	-1.710	-14.829	-11.025	0.000	-0.645	-3.819	4	0.08	0.00	0.28		
1D	0	-1.710	-3.893	-11.025	0.000	-0.645	-6.061	4	0.08	0.00	0.37		
1E	0	5.240	-14.829	-4.784	0.000	0.178	-3.819	1	0.05	0.01	0.11		
1F	0	5.240	-3.893	-4.784	0.000	0.178	-6.061	1	0.04	0.01	0.16		
1G	0	5.240	-14.829	-11.025	0.000	-0.645	-3.819	4	0.08	0.01	0.28		
1H	0	5.240	-3.893	-11.025	0.000	-0.645	-6.061	4	0.08	0.01	0.37		
1I	0	-2.837	-13.411	-5.289	0.000	0.703	-3.505	1	0.04	0.00	0.14		
1J	0	-2.837	-5.311	-5.289	0.000	0.703	-6.375	1	0.04	0.00	0.20		
1K	0	-2.837	-13.411	-10.519	0.000	-1.170	-3.505	4	0.08	0.00	0.36		
1L	0	-2.837	-5.311	-10.519	0.000	-1.170	-6.375	4	0.08	0.00	0.48		
1M	0	6.367	-13.411	-5.289	0.000	0.703	-3.505	1	0.04	0.01	0.14		
1N	0	6.367	-5.311	-5.289	0.000	0.703	-6.375	1	0.04	0.01	0.21		
1O	0	6.367	-13.411	-10.519	0.000	-1.170	-3.505	4	0.08	0.01	0.36		
1P	0	6.367	-5.311	-10.519	0.000	-1.170	-6.375	4	0.08	0.01	0.48		
2	0	3.186	-17.560	-15.030	0.000	-0.446	-9.385	4	0.11	0.01	0.47		
7	0	10.690	-17.640	-16.380	0.000	0.185	-3.147	3	0.12	0.02	0.18		
1A	5	-1.710	-14.840	-4.784	0.000	0.606	-4.128	1	0.05	0.00	0.14		
1B	5	-1.710	-3.904	-4.784	0.000	0.606	-6.688	1	0.04	0.00	0.20		
1C	5	-1.710	-14.840	-11.025	0.000	-0.282	-4.128	4	0.08	0.00	0.23		
1D	5	-1.710	-3.904	-11.025	0.000	-0.282	-6.688	4	0.08	0.00	0.33		
1E	5	5.240	-14.840	-4.784	0.000	0.606	-4.128	1	0.05	0.01	0.15		
1F	5	5.240	-3.904	-4.784	0.000	0.606	-6.688	1	0.04	0.01	0.21		
1G	5	5.240	-14.840	-11.025	0.000	-0.282	-4.128	4	0.08	0.01	0.23		
1H	5	5.240	-3.904	-11.025	0.000	-0.282	-6.688	4	0.08	0.01	0.33		
1I	5	-2.837	-13.422	-5.289	0.000	1.124	-3.890	1	0.04	0.00	0.18		
1J	5	-2.837	-5.322	-5.289	0.000	1.124	-6.926	1	0.04	0.00	0.25		
1K	5	-2.837	-13.422	-10.519	0.000	-0.801	-3.890	4	0.08	0.00	0.31		
1L	5	-2.837	-5.322	-10.519	0.000	-0.801	-6.926	4	0.08	0.00	0.44		
1M	5	6.367	-13.422	-5.289	0.000	1.124	-3.890	1	0.04	0.01	0.18		
1N	5	6.367	-5.322	-5.289	0.000	1.124	-6.926	1	0.04	0.01	0.25		
1O	5	6.367	-13.422	-10.519	0.000	-0.801	-3.890	4	0.08	0.01	0.31		
1P	5	6.367	-5.322	-10.519	0.000	-0.801	-6.926	4	0.08	0.01	0.44		
2	5	3.186	-17.575	-15.030	0.000	0.306	-10.262	1	0.11	0.01	0.27		
7	5	10.690	-17.650	-16.380	0.000	1.004	-4.029	1	0.12	0.02	0.18		
1A	10	-1.710	-14.851	-4.784	0.000	1.033	-4.438	1	0.05	0.00	0.18		
1B	10	-1.710	-3.915	-4.784	0.000	1.033	-7.316	1	0.04	0.00	0.25		
1C	10	-1.710	-14.851	-11.025	0.000	0.080	-4.438	1	0.08	0.00	0.11		
1D	10	-1.710	-3.915	-11.025	0.000	0.080	-7.316	1	0.08	0.00	0.18		
1E	10	5.240	-14.851	-4.784	0.000	1.033	-4.438	1	0.05	0.01	0.19		
1F	10	5.240	-3.915	-4.784	0.000	1.033	-7.316	1	0.04	0.01	0.25		

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1G	10	5.240	-14.851	-11.025	0.000	0.080	-4.438	1	0.08	0.01	0.12	
1H	10	5.240	-3.915	-11.025	0.000	0.080	-7.316	1	0.08	0.01	0.18	
1I	10	-2.837	-13.433	-5.289	0.000	1.546	-4.277	1	0.04	0.00	0.22	
1J	10	-2.837	-5.333	-5.289	0.000	1.546	-7.477	1	0.04	0.00	0.29	
1K	10	-2.837	-13.433	-10.519	0.000	-0.432	-4.277	4	0.08	0.00	0.26	
1L	10	-2.837	-5.333	-10.519	0.000	-0.432	-7.477	4	0.08	0.00	0.39	
1M	10	6.367	-13.433	-5.289	0.000	1.546	-4.277	1	0.04	0.01	0.22	
1N	10	6.367	-5.333	-5.289	0.000	1.546	-7.477	1	0.04	0.01	0.30	
1O	10	6.367	-13.433	-10.519	0.000	-0.432	-4.277	4	0.08	0.01	0.26	
1P	10	6.367	-5.333	-10.519	0.000	-0.432	-7.477	4	0.08	0.01	0.39	
2	10	3.186	-17.590	-15.030	0.000	1.057	-11.140	1	0.11	0.01	0.34	
7	10	10.690	-17.660	-16.380	0.000	1.823	-4.912	1	0.12	0.02	0.26	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-1.710	1.033	-4.438	1	0.8236	0.9976	1.0001	--	--	0.00	--	0.18	Snell.imin= 5
1B	-1.710	1.033	-7.316	1	0.8236	0.9976	1.0001	--	--	0.00	--	0.25	Snell.imin= 5
1C	-1.710	-0.645	-4.438	4	0.8236	1.0003	1.0022	--	--	0.00	--	0.30	Snell.imin= 5
1D	-1.710	-0.645	-7.316	4	0.8236	1.0003	1.0021	--	--	0.00	--	0.42	Snell.imin= 5
1E	5.240	1.033	-4.438	1	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1F	5.240	1.033	-7.316	1	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1G	5.240	-0.645	-4.438	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1H	5.240	-0.645	-7.316	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1I	-2.837	1.546	-4.277	1	0.8236	0.9962	1.0001	--	--	0.00	--	0.22	Snell.imin= 5
1J	-2.837	1.546	-7.477	1	0.8236	0.9962	1.0002	--	--	0.00	--	0.29	Snell.imin= 5
1K	-2.837	-1.170	-4.277	4	0.8236	1.0022	1.0035	--	--	0.00	--	0.39	Snell.imin= 5
1L	-2.837	-1.170	-7.477	4	0.8236	1.0022	1.0036	--	--	0.00	--	0.52	Snell.imin= 5
1M	6.367	1.546	-4.277	1	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1N	6.367	1.546	-7.477	1	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1O	6.367	-1.170	-4.277	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1P	6.367	-1.170	-7.477	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
2	3.186	1.057	-11.140	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
7	10.690	1.823	-4.912	3	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5

**ASTA NUM. 32** NI 33 NF 2 Lugh. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y qy tot.  
qy medio: 0.22 0.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-0.633	-7.189	0.858	0.000	0.456	0.590	1	0.02	0.00	0.05	
1B	0	-0.633	-3.171	0.858	0.000	0.456	-0.339	1	0.01	0.00	0.04	
1C	0	-0.633	-7.189	-0.953	0.000	-0.461	0.590	4	0.02	0.00	0.12	
1D	0	-0.633	-3.171	-0.953	0.000	-0.461	-0.339	4	0.01	0.00	0.10	
1E	0	2.869	-7.189	0.858	0.000	0.456	0.590	1	0.02	0.01	0.05	
1F	0	2.869	-3.171	0.858	0.000	0.456	-0.339	3	0.01	0.01	0.10	
1G	0	2.869	-7.189	-0.953	0.000	-0.461	0.590	4	0.02	0.01	0.12	
1H	0	2.869	-3.171	-0.953	0.000	-0.461	-0.339	4	0.01	0.01	0.10	
1I	0	-1.187	-8.863	1.987	0.000	1.059	1.177	1	0.03	0.00	0.11	
1J	0	-1.187	-1.497	1.987	0.000	1.059	-0.925	1	0.01	0.00	0.10	
1K	0	-1.187	-8.863	-2.082	0.000	-1.064	1.177	4	0.03	0.00	0.26	
1L	0	-1.187	-1.497	-2.082	0.000	-1.064	-0.925	4	0.02	0.00	0.23	
1M	0	3.423	-8.863	1.987	0.000	1.059	1.177	1	0.03	0.01	0.11	
1N	0	3.423	-1.497	1.987	0.000	1.059	-0.925	3	0.01	0.01	0.23	
1O	0	3.423	-8.863	-2.082	0.000	-1.064	1.177	4	0.03	0.01	0.26	
1P	0	3.423	-1.497	-2.082	0.000	-1.064	-0.925	4	0.02	0.01	0.23	
2	0	2.040	-9.897	-0.083	0.000	-0.002	0.238	4	0.03	0.00	0.02	
7	0	5.496	-3.069	-0.430	0.000	-0.130	0.032	4	0.01	0.01	0.03	
1A	45	-0.633	-7.287	0.858	0.000	0.069	-2.701	1	0.02	0.00	0.07	
1B	45	-0.633	-3.269	0.858	0.000	0.069	-1.755	1	0.01	0.00	0.05	
1C	45	-0.633	-7.287	-0.953	0.000	-0.031	-2.701	4	0.02	0.00	0.12	
1D	45	-0.633	-3.269	-0.953	0.000	-0.031	-1.755	4	0.01	0.00	0.08	
1E	45	2.869	-7.287	0.858	0.000	0.069	-2.701	1	0.02	0.01	0.07	
1F	45	2.869	-3.269	0.858	0.000	0.069	-1.755	1	0.01	0.01	0.05	
1G	45	2.869	-7.287	-0.953	0.000	-0.031	-2.701	4	0.02	0.01	0.12	
1H	45	2.869	-3.269	-0.953	0.000	-0.031	-1.755	4	0.01	0.01	0.08	
1I	45	-1.187	-8.961	1.987	0.000	0.164	-2.866	1	0.03	0.00	0.08	
1J	45	-1.187	-1.595	1.987	0.000	0.164	-1.589	1	0.01	0.00	0.05	
1K	45	-1.187	-8.961	-2.082	0.000	-0.126	-2.866	4	0.03	0.00	0.14	
1L	45	-1.187	-1.595	-2.082	0.000	-0.126	-1.589	4	0.02	0.00	0.09	
1M	45	3.423	-8.961	1.987	0.000	0.164	-2.866	1	0.03	0.01	0.08	
1N	45	3.423	-1.595	1.987	0.000	0.164	-1.589	1	0.01	0.01	0.05	
1O	45	3.423	-8.961	-2.082	0.000	-0.126	-2.866	4	0.03	0.01	0.15	
1P	45	3.423	-1.595	-2.082	0.000	-0.126	-1.589	4	0.02	0.01	0.09	
2	45	2.040	-10.024	-0.083	0.000	0.035	-4.244	1	0.03	0.00	0.10	
7	45	5.496	-3.196	-0.430	0.000	0.063	-1.377	3	0.01	0.01	0.08	
1A	90	-0.633	-7.385	0.858	0.000	-0.318	-6.035	4	0.02	0.00	0.31	
1B	90	-0.633	-3.367	0.858	0.000	-0.318	-3.215	4	0.01	0.00	0.19	
1C	90	-0.633	-7.385	-0.953	0.000	0.398	-6.035	1	0.02	0.00	0.17	
1D	90	-0.633	-3.367	-0.953	0.000	0.398	-3.215	1	0.01	0.00	0.10	
1E	90	2.869	-7.385	0.858	0.000	-0.318	-6.035	4	0.02	0.01	0.31	
1F	90	2.869	-3.367	0.858	0.000	-0.318	-3.215	4	0.01	0.01	0.19	
1G	90	2.869	-7.385	-0.953	0.000	0.398	-6.035	1	0.02	0.01	0.17	
1H	90	2.869	-3.367	-0.953	0.000	0.398	-3.215	1	0.01	0.01	0.11	
1I	90	-1.187	-9.059	1.987	0.000	-0.731	-6.954	4	0.03	0.00	0.42	
1J	90	-1.187	-1.693	1.987	0.000	-0.731	-2.296	4	0.01	0.00	0.23	
1K	90	-1.187	-9.059	-2.082	0.000	0.811	-6.954	1	0.03	0.00	0.22	
1L	90	-1.187	-1.693	-2.082	0.000	0.811	-2.296	1	0.02	0.00	0.11	
1M	90	3.423	-9.059	1.987	0.000	-0.731	-6.954	4	0.03	0.01	0.42	
1N	90	3.423	-1.693	1.987	0.000	-0.731	-2.296	4	0.01	0.01	0.23	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

10	90	3.423	-9.059	-2.082	0.000	0.811	-6.954	1	0.03	0.01	0.23
1P	90	3.423	-1.693	-2.082	0.000	0.811	-2.296	1	0.02	0.01	0.12
2	90	2.040	-10.150	-0.083	0.000	0.073	-8.783	1	0.03	0.00	0.21
7	90	5.496	-3.323	-0.430	0.000	0.257	-2.844	1	0.01	0.01	0.09

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-0.633	0.456	-6.035	4	0.6568	0.9994	1.0002	--	--	0.00	--	0.33	Snell.imin= 46
1B	-0.633	0.456	-3.215	4	0.6568	0.9994	1.0004	--	--	0.00	--	0.21	Snell.imin= 46
1C	-0.633	-0.461	-6.035	4	0.6568	0.9992	1.0002	--	--	0.00	--	0.33	Snell.imin= 46
1D	-0.633	-0.461	-3.215	4	0.6568	0.9992	1.0004	--	--	0.00	--	0.22	Snell.imin= 46
1E	2.869	0.456	-6.035	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1F	2.869	0.456	-3.215	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1G	2.869	-0.461	-6.035	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1H	2.869	-0.461	-3.215	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1I	-1.187	1.059	-6.954	4	0.6568	0.9989	1.0002	--	--	0.00	--	0.48	Snell.imin= 46
1J	-1.187	1.059	-2.296	4	0.6568	0.9989	1.0013	--	--	0.00	--	0.28	Snell.imin= 46
1K	-1.187	-1.064	-6.954	4	0.6568	0.9987	1.0002	--	--	0.00	--	0.48	Snell.imin= 46
1L	-1.187	-1.064	-2.296	4	0.6568	0.9987	1.0013	--	--	0.00	--	0.28	Snell.imin= 46
1M	3.423	1.059	-6.954	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1N	3.423	1.059	-2.296	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1O	3.423	-1.064	-6.954	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1P	3.423	-1.064	-2.296	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
2	2.040	0.073	-8.783	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
7	5.496	0.257	-2.844	4	0.6568	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46

**ASTA NUM. 33** NI 77 NF 84 Lungh. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.22 1.13 2.00 3.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-3.718	-7.130	1.925	0.000	0.960	1.079	1	0.02	0.01	0.10	
1B	0	-3.718	-3.676	1.925	0.000	0.960	0.076	4	0.01	0.01	0.06	
1C	0	-3.718	-7.130	-0.311	0.000	-0.158	1.079	4	0.02	0.01	0.10	
1D	0	-3.718	-3.676	-0.311	0.000	-0.158	0.076	4	0.01	0.01	0.04	
1E	0	1.729	-7.130	1.925	0.000	0.960	1.079	1	0.02	0.00	0.10	
1F	0	1.729	-3.676	1.925	0.000	0.960	0.076	3	0.01	0.00	0.17	
1G	0	1.729	-7.130	-0.311	0.000	-0.158	1.079	4	0.02	0.00	0.10	
1H	0	1.729	-3.676	-0.311	0.000	-0.158	0.076	4	0.01	0.00	0.03	
1I	0	-3.576	-8.378	3.346	0.000	1.664	1.645	1	0.03	0.00	0.16	
1J	0	-3.576	-2.428	3.346	0.000	1.664	-0.491	3	0.02	0.00	0.32	
1K	0	-3.576	-8.378	-1.732	0.000	-0.862	1.645	4	0.03	0.01	0.26	
1L	0	-3.576	-2.428	-1.732	0.000	-0.862	-0.491	4	0.01	0.01	0.18	
1M	0	1.587	-8.378	3.346	0.000	1.664	1.645	1	0.03	0.00	0.16	
1N	0	1.587	-2.428	3.346	0.000	1.664	-0.491	3	0.02	0.00	0.31	
1O	0	1.587	-8.378	-1.732	0.000	-0.862	1.645	4	0.03	0.00	0.26	
1P	0	1.587	-2.428	-1.732	0.000	-0.862	-0.491	4	0.01	0.00	0.17	
2	0	-1.027	-9.711	1.353	0.000	0.698	1.059	1	0.03	0.00	0.08	
7	0	-0.823	-12.620	3.060	0.000	1.503	1.587	1	0.04	0.00	0.15	
1A	45	-3.718	-8.274	1.925	0.000	0.091	-2.447	1	0.03	0.01	0.07	
1B	45	-3.718	-4.820	1.925	0.000	0.091	-1.776	1	0.02	0.01	0.05	
1C	45	-3.718	-8.274	-0.311	0.000	-0.015	-2.447	4	0.03	0.01	0.12	
1D	45	-3.718	-4.820	-0.311	0.000	-0.015	-1.776	4	0.02	0.01	0.09	
1E	45	1.729	-8.274	1.925	0.000	0.091	-2.447	1	0.03	0.00	0.07	
1F	45	1.729	-4.820	1.925	0.000	0.091	-1.776	1	0.02	0.00	0.05	
1G	45	1.729	-8.274	-0.311	0.000	-0.015	-2.447	4	0.03	0.00	0.11	
1H	45	1.729	-4.820	-0.311	0.000	-0.015	-1.776	4	0.02	0.00	0.08	
1I	45	-3.576	-9.522	3.346	0.000	0.156	-2.423	1	0.03	0.00	0.07	
1J	45	-3.576	-3.572	3.346	0.000	0.156	-1.800	1	0.02	0.00	0.06	
1K	45	-3.576	-9.522	-1.732	0.000	-0.080	-2.423	4	0.03	0.01	0.13	
1L	45	-3.576	-3.572	-1.732	0.000	-0.080	-1.800	4	0.01	0.01	0.10	
1M	45	1.587	-9.522	3.346	0.000	0.156	-2.423	1	0.03	0.00	0.07	
1N	45	1.587	-3.572	3.346	0.000	0.156	-1.800	1	0.02	0.00	0.06	
1O	45	1.587	-9.522	-1.732	0.000	-0.080	-2.423	4	0.03	0.00	0.12	
1P	45	1.587	-3.572	-1.732	0.000	-0.080	-1.800	4	0.01	0.00	0.09	
2	45	-1.027	-11.846	1.353	0.000	0.089	-3.792	1	0.04	0.00	0.10	
7	45	-0.823	-13.405	3.060	0.000	0.127	-4.270	1	0.04	0.00	0.11	
1A	90	-3.718	-9.418	1.925	0.000	-0.779	-6.487	4	0.03	0.01	0.42	
1B	90	-3.718	-5.964	1.925	0.000	-0.779	-4.143	4	0.02	0.01	0.32	
1C	90	-3.718	-9.418	-0.311	0.000	0.128	-6.487	1	0.03	0.01	0.17	
1D	90	-3.718	-5.964	-0.311	0.000	0.128	-4.143	1	0.02	0.01	0.11	
1E	90	1.729	-9.418	1.925	0.000	-0.779	-6.487	4	0.03	0.00	0.41	
1F	90	1.729	-5.964	1.925	0.000	-0.779	-4.143	4	0.02	0.00	0.31	
1G	90	1.729	-9.418	-0.311	0.000	0.128	-6.487	1	0.03	0.00	0.16	
1H	90	1.729	-5.964	-0.311	0.000	0.128	-4.143	1	0.02	0.00	0.11	
1I	90	-3.576	-10.666	3.346	0.000	-1.352	-7.005	4	0.04	0.01	0.54	
1J	90	-3.576	-4.716	3.346	0.000	-1.352	-3.625	4	0.02	0.01	0.40	
1K	90	-3.576	-10.666	-1.732	0.000	0.701	-7.005	1	0.04	0.00	0.22	
1L	90	-3.576	-4.716	-1.732	0.000	0.701	-3.625	1	0.02	0.00	0.14	
1M	90	1.587	-10.666	3.346	0.000	-1.352	-7.005	4	0.04	0.00	0.53	
1N	90	1.587	-4.716	3.346	0.000	-1.352	-3.625	4	0.02	0.00	0.39	
1O	90	1.587	-10.666	-1.732	0.000	0.701	-7.005	1	0.04	0.00	0.22	
1P	90	1.587	-4.716	-1.732	0.000	0.701	-3.625	1	0.02	0.00	0.14	
2	90	-1.027	-13.980	1.353	0.000	-0.520	-9.603	4	0.05	0.00	0.49	
7	90	-0.823	-14.190	3.060	0.000	-1.250	-10.480	4	0.05	0.00	0.66	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-3.718	0.960	-6.487	4	0.6678	0.9947	1.0012	--	--	0.01	--	0.45	Snell.imin= 46
1B	-3.718	0.960	-4.143	4	0.6678	0.9947	1.0025	--	--	0.01	--	0.35	Snell.imin= 46
1C	-3.718	-0.158	-6.487	4	0.6678	0.9947	1.0012	--	--	0.01	--	0.31	Snell.imin= 46
1D	-3.718	-0.158	-4.143	4	0.6678	0.9947	1.0025	--	--	0.01	--	0.22	Snell.imin= 46
1E	1.729	0.960	-6.487	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1F	1.729	0.960	-4.143	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1G	1.729	-0.158	-6.487	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1H	1.729	-0.158	-4.143	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1I	-3.576	1.664	-7.005	4	0.6678	0.9949	1.0007	--	--	0.01	--	0.59	Snell.imin= 46
1J	-3.576	1.664	-3.625	4	0.6678	0.9949	1.0034	--	--	0.01	--	0.45	Snell.imin= 46
1K	-3.576	-0.862	-7.005	4	0.6678	0.9949	1.0007	--	--	0.01	--	0.46	Snell.imin= 46
1L	-3.576	-0.862	-3.625	4	0.6678	0.9949	1.0034	--	--	0.01	--	0.32	Snell.imin= 46
1M	1.587	1.664	-7.005	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1N	1.587	1.664	-3.625	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1O	1.587	-0.862	-7.005	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1P	1.587	-0.862	-3.625	4	0.6678	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
2	-1.027	0.698	-9.603	4	0.6678	0.9987	1.0004	--	--	0.00	--	0.52	Snell.imin= 46
7	-0.823	1.503	-10.480	4	0.6678	0.9988	1.0003	--	--	0.00	--	0.70	Snell.imin= 46

ASTA NUM. 34 NI 121 NF 129 Lungh. 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y qy tot.

qy medio: 0,22 0,22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-3.867	7.212	-4.440	0.000	-0.391	-5.385	4	0.03	0.01	0.30	
1B	0	-3.867	13.008	-4.440	0.000	-0.391	-8.677	4	0.04	0.01	0.44	
1C	0	-3.867	7.212	-12.156	0.000	-0.975	-5.385	4	0.09	0.01	0.41	
1D	0	-3.867	13.008	-12.156	0.000	-0.975	-8.677	4	0.09	0.01	0.54	
1E	0	2.269	7.212	-4.440	0.000	-0.391	-5.385	4	0.03	0.01	0.29	
1F	0	2.269	13.008	-4.440	0.000	-0.391	-8.677	4	0.04	0.01	0.43	
1G	0	2.269	7.212	-12.156	0.000	-0.975	-5.385	4	0.09	0.01	0.40	
1H	0	2.269	13.008	-12.156	0.000	-0.975	-8.677	4	0.09	0.01	0.53	
1I	0	-2.945	8.086	-4.438	0.000	-0.256	-4.700	4	0.03	0.01	0.25	
1J	0	-2.945	12.134	-4.438	0.000	-0.256	-9.362	4	0.04	0.01	0.44	
1K	0	-2.945	8.086	-12.158	0.000	-1.110	-4.700	4	0.09	0.01	0.40	
1L	0	-2.945	12.134	-12.158	0.000	-1.110	-9.362	4	0.09	0.01	0.59	
1M	0	1.347	8.086	-4.438	0.000	-0.256	-4.700	4	0.03	0.00	0.24	
1N	0	1.347	12.134	-4.438	0.000	-0.256	-9.362	4	0.04	0.00	0.43	
1O	0	1.347	8.086	-12.158	0.000	-1.110	-4.700	4	0.09	0.00	0.39	
1P	0	1.347	12.134	-12.158	0.000	-1.110	-9.362	4	0.09	0.00	0.58	
2	0	-1.636	20.460	-15.380	0.000	-1.272	-13.430	4	0.11	0.00	0.78	
7	0	2.569	2.394	-17.620	0.000	-1.260	-4.410	4	0.13	0.01	0.41	

1A	5	-3.867	7.202	-4.440	0.000	-0.307	-4.887	4	0.03	0.01	0.27	
1B	5	-3.867	12.998	-4.440	0.000	-0.307	-8.164	4	0.04	0.01	0.40	
1C	5	-3.867	7.202	-12.156	0.000	-0.229	-4.887	4	0.09	0.01	0.26	
1D	5	-3.867	12.998	-12.156	0.000	-0.229	-8.164	4	0.09	0.01	0.39	
1E	5	2.269	7.202	-4.440	0.000	-0.307	-4.887	4	0.03	0.01	0.26	
1F	5	2.269	12.998	-4.440	0.000	-0.307	-8.164	4	0.04	0.01	0.39	
1G	5	2.269	7.202	-12.156	0.000	-0.229	-4.887	4	0.09	0.01	0.25	
1H	5	2.269	12.998	-12.156	0.000	-0.229	-8.164	4	0.09	0.01	0.38	
1I	5	-2.945	8.076	-4.438	0.000	0.150	-4.232	1	0.03	0.00	0.11	
1J	5	-2.945	12.124	-4.438	0.000	0.150	-8.820	1	0.04	0.00	0.22	
1K	5	-2.945	8.076	-12.158	0.000	-0.686	-4.232	4	0.09	0.01	0.31	
1L	5	-2.945	12.124	-12.158	0.000	-0.686	-8.820	4	0.09	0.01	0.50	
1M	5	1.347	8.076	-4.438	0.000	0.150	-4.232	1	0.03	0.00	0.11	
1N	5	1.347	12.124	-4.438	0.000	0.150	-8.820	1	0.04	0.00	0.22	
1O	5	1.347	8.076	-12.158	0.000	-0.686	-4.232	4	0.09	0.00	0.30	
1P	5	1.347	12.124	-12.158	0.000	-0.686	-8.820	4	0.09	0.00	0.49	
2	5	-1.636	20.445	-15.380	0.000	-0.503	-12.410	4	0.11	0.00	0.61	
7	5	2.569	2.380	-17.620	0.000	-0.379	-4.291	4	0.13	0.01	0.25	

1A	10	-3.867	7.192	-4.440	0.000	-0.222	-4.389	4	0.03	0.01	0.23	
1B	10	-3.867	12.988	-4.440	0.000	-0.222	-7.653	4	0.04	0.01	0.37	
1C	10	-3.867	7.192	-12.156	0.000	0.516	-4.389	1	0.09	0.01	0.15	
1D	10	-3.867	12.988	-12.156	0.000	0.516	-7.653	1	0.09	0.01	0.22	
1E	10	2.269	7.192	-4.440	0.000	-0.222	-4.389	4	0.03	0.01	0.22	
1F	10	2.269	12.988	-4.440	0.000	-0.222	-7.653	4	0.04	0.01	0.36	
1G	10	2.269	7.192	-12.156	0.000	0.516	-4.389	1	0.09	0.01	0.14	
1H	10	2.269	12.988	-12.156	0.000	0.516	-7.653	1	0.09	0.01	0.22	
1I	10	-2.945	8.066	-4.438	0.000	0.556	-3.764	1	0.03	0.00	0.13	
1J	10	-2.945	12.114	-4.438	0.000	0.556	-8.278	1	0.04	0.00	0.24	
1K	10	-2.945	8.066	-12.158	0.000	-0.262	-3.764	4	0.09	0.01	0.21	
1L	10	-2.945	12.114	-12.158	0.000	-0.262	-8.278	4	0.09	0.01	0.40	
1M	10	1.347	8.066	-4.438	0.000	0.556	-3.764	1	0.03	0.00	0.13	
1N	10	1.347	12.114	-4.438	0.000	0.556	-8.278	1	0.04	0.00	0.24	
1O	10	1.347	8.066	-12.158	0.000	-0.262	-3.764	4	0.09	0.00	0.20	
1P	10	1.347	12.114	-12.158	0.000	-0.262	-8.278	4	0.09	0.00	0.39	
2	10	-1.636	20.430	-15.380	0.000	0.266	-11.390	1	0.11	0.00	0.29	
7	10	2.569	2.365	-17.620	0.000	0.502	-4.172	1	0.13	0.01	0.14	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-3.867	-0.391	-5.385	4	0.8236	1.0039	1.0047	--	--	0.01	--	0.30	Snell.imin= 5
1B	-3.867	-0.391	-8.677	4	0.8236	1.0039	1.0050	--	--	0.01	--	0.44	Snell.imin= 5

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1C	-3.867	-0.975	-5.385	4	0.8236	0.9989	1.0047	--	--	0.01	--	0.40	Snell.imin=	5
1D	-3.867	-0.975	-8.677	4	0.8236	0.9989	1.0050	--	--	0.01	--	0.54	Snell.imin=	5
1E	2.269	-0.391	-5.385	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1F	2.269	-0.391	-8.677	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1G	2.269	-0.975	-5.385	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1H	2.269	-0.975	-8.677	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1I	-2.945	0.556	-4.700	4	0.8236	0.9994	1.0035	--	--	0.00	--	0.30	Snell.imin=	5
1J	-2.945	0.556	-9.362	4	0.8236	0.9994	1.0038	--	--	0.00	--	0.49	Snell.imin=	5
1K	-2.945	-1.110	-4.700	4	0.8236	1.0018	1.0035	--	--	0.00	--	0.40	Snell.imin=	5
1L	-2.945	-1.110	-9.362	4	0.8236	1.0018	1.0038	--	--	0.00	--	0.59	Snell.imin=	5
1M	1.347	0.556	-4.700	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1N	1.347	0.556	-9.362	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1O	1.347	-1.110	-4.700	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
1P	1.347	-1.110	-9.362	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5
2	-1.636	-1.272	-13.430	4	0.8236	1.0001	1.0021	--	--	0.00	--	0.78	Snell.imin=	5
7	2.569	-1.260	-4.410	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin=	5

ASTA NUM. 35 NI 123 NF 125 Lungh. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.22 1.13 2.00 3.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							
1A	0	-3.512	3.945	0.214	0.000	0.170	-2.598	1	0.01	0.00	0.08	
1B	0	-3.512	5.177	0.214	0.000	0.170	-3.734	1	0.02	0.00	0.10	
1C	0	-3.512	3.945	-0.004	0.000	0.003	-2.598	4	0.01	0.01	0.12	
1D	0	-3.512	5.177	-0.004	0.000	0.003	-3.734	4	0.02	0.01	0.16	
1E	0	3.701	3.945	0.214	0.000	0.170	-2.598	1	0.01	0.01	0.08	
1F	0	3.701	5.177	0.214	0.000	0.170	-3.734	1	0.02	0.01	0.10	
1G	0	3.701	3.945	-0.004	0.000	0.003	-2.598	1	0.01	0.01	0.07	
1H	0	3.701	5.177	-0.004	0.000	0.003	-3.734	1	0.02	0.01	0.09	
1I	0	-5.564	4.063	0.369	0.000	0.277	-2.677	1	0.01	0.01	0.09	
1J	0	-5.564	5.059	0.369	0.000	0.277	-3.655	1	0.02	0.01	0.11	
1K	0	-5.564	4.063	-0.159	0.000	-0.103	-2.677	4	0.01	0.01	0.15	
1L	0	-5.564	5.059	-0.159	0.000	-0.103	-3.655	4	0.02	0.01	0.19	
1M	0	5.753	4.063	0.369	0.000	0.277	-2.677	1	0.01	0.01	0.09	
1N	0	5.753	5.059	0.369	0.000	0.277	-3.655	1	0.02	0.01	0.11	
1O	0	5.753	4.063	-0.159	0.000	-0.103	-2.677	4	0.01	0.01	0.14	
1P	0	5.753	5.059	-0.159	0.000	-0.103	-3.655	4	0.02	0.01	0.18	
2	0	1.150	8.523	0.177	0.000	0.144	-5.920	1	0.03	0.00	0.15	
7	0	3.441	3.908	0.450	0.000	0.330	-2.836	1	0.01	0.01	0.09	
1A	45	-3.512	2.801	0.214	0.000	0.066	-1.054	3	0.01	0.00	0.06	
1B	45	-3.512	4.033	0.214	0.000	0.066	-1.688	1	0.01	0.00	0.05	
1C	45	-3.512	2.801	-0.004	0.000	0.013	-1.054	4	0.01	0.01	0.05	
1D	45	-3.512	4.033	-0.004	0.000	0.013	-1.688	4	0.01	0.01	0.08	
1E	45	3.701	2.801	0.214	0.000	0.066	-1.054	3	0.01	0.01	0.06	
1F	45	3.701	4.033	0.214	0.000	0.066	-1.688	1	0.01	0.01	0.05	
1G	45	3.701	2.801	-0.004	0.000	0.013	-1.054	3	0.01	0.01	0.05	
1H	45	3.701	4.033	-0.004	0.000	0.013	-1.688	1	0.01	0.01	0.05	
1I	45	-5.564	2.919	0.369	0.000	0.108	-1.094	3	0.01	0.01	0.07	
1J	45	-5.564	3.915	0.369	0.000	0.108	-1.648	3	0.01	0.01	0.09	
1K	45	-5.564	2.919	-0.159	0.000	-0.029	-1.094	4	0.01	0.01	0.07	
1L	45	-5.564	3.915	-0.159	0.000	-0.029	-1.648	4	0.01	0.01	0.09	
1M	45	5.753	2.919	0.369	0.000	0.108	-1.094	3	0.01	0.01	0.07	
1N	45	5.753	3.915	0.369	0.000	0.108	-1.648	3	0.01	0.01	0.09	
1O	45	5.753	2.919	-0.159	0.000	-0.029	-1.094	3	0.01	0.01	0.06	
1P	45	5.753	3.915	-0.159	0.000	-0.029	-1.648	3	0.01	0.01	0.08	
2	45	1.150	6.388	0.177	0.000	0.065	-2.565	1	0.02	0.00	0.07	
7	45	3.441	3.123	0.450	0.000	0.128	-1.254	1	0.01	0.01	0.04	
1A	90	-3.512	1.657	0.214	0.000	-0.038	-0.025	4	0.01	0.01	0.02	
1B	90	-3.512	2.889	0.214	0.000	-0.038	-0.157	4	0.01	0.01	0.03	
1C	90	-3.512	1.657	-0.004	0.000	0.023	-0.025	4	0.01	0.01	0.01	
1D	90	-3.512	2.889	-0.004	0.000	0.023	-0.157	4	0.01	0.01	0.02	
1E	90	3.701	1.657	0.214	0.000	-0.038	-0.025	4	0.01	0.01	0.01	
1F	90	3.701	2.889	0.214	0.000	-0.038	-0.157	4	0.01	0.01	0.02	
1G	90	3.701	1.657	-0.004	0.000	0.023	-0.025	1	0.01	0.01	0.01	
1H	90	3.701	2.889	-0.004	0.000	0.023	-0.157	1	0.01	0.01	0.01	
1I	90	-5.564	1.775	0.369	0.000	-0.061	-0.026	4	0.01	0.01	0.03	
1J	90	-5.564	2.771	0.369	0.000	-0.061	-0.156	4	0.01	0.01	0.04	
1K	90	-5.564	1.775	-0.159	0.000	0.046	-0.026	4	0.01	0.01	0.02	
1L	90	-5.564	2.771	-0.159	0.000	0.046	-0.156	3	0.01	0.01	0.02	
1M	90	5.753	1.775	0.369	0.000	-0.061	-0.026	4	0.01	0.01	0.02	
1N	90	5.753	2.771	0.369	0.000	-0.061	-0.156	4	0.01	0.01	0.02	
1O	90	5.753	1.775	-0.159	0.000	0.046	-0.026	1	0.01	0.01	0.01	
1P	90	5.753	2.771	-0.159	0.000	0.046	-0.156	1	0.01	0.01	0.01	
2	90	1.150	4.253	0.177	0.000	-0.015	-0.171	4	0.01	0.00	0.01	
7	90	3.441	2.338	0.450	0.000	-0.075	-0.025	4	0.01	0.01	0.02	

Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
--	kN					kN*m							
1A	-3.512	0.170	-2.598	4	0.6449	1.0005	1.0021	--	--	0.01	--	0.15	Snell.imin= 46
1B	-3.512	0.170	-3.734	4	0.6449	1.0005	1.0021	--	--	0.01	--	0.19	Snell.imin= 46
1C	-3.512	0.023	-2.598	4	0.6449	1.0034	1.0021	--	--	0.01	--	0.12	Snell.imin= 46
1D	-3.512	0.023	-3.734	4	0.6449	1.0034	1.0021	--	--	0.01	--	0.17	Snell.imin= 46
1E	3.701	0.170	-2.598	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1F	3.701	0.170	-3.734	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1G	3.701	0.023	-2.598	3	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1H	3.701	0.023	-3.734	1	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin= 46
1I	-5.564	0.277	-2.677	4	0.6449	1.0008	1.0033	--	--	0.01	--	0.17	Snell.imin= 46
1J	-5.564	0.277	-3.655	4	0.6449	1.0008	1.0033	--	--	0.01	--	0.21	Snell.imin= 46

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1K	-5.564	-0.103	-2.677	4	0.6449	0.9980	1.0033	--	--	0.01	--	0.14	Snell.imin=	46
1L	-5.564	-0.103	-3.655	4	0.6449	0.9980	1.0033	--	--	0.01	--	0.18	Snell.imin=	46
1M	5.753	0.277	-2.677	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1N	5.753	0.277	-3.655	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1O	5.753	-0.103	-2.677	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1P	5.753	-0.103	-3.655	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
2	1.150	0.144	-5.920	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
7	3.441	0.330	-2.836	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46

**ASTA NUM. 36** NI 124 NF 126 Lungh. 90.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.

qy medio: 0.22 1.00 1.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							
1A	0	-1.199	2.583	0.050	0.000	0.027	-1.596	1	0.01	0.00	0.04	
1B	0	-1.199	3.819	0.050	0.000	0.027	-2.558	1	0.01	0.00	0.06	
1C	0	-1.199	2.583	-0.057	0.000	-0.016	-1.596	4	0.01	0.00	0.07	
1D	0	-1.199	3.819	-0.057	0.000	-0.016	-2.558	4	0.01	0.00	0.11	
1E	0	3.917	2.583	0.050	0.000	0.027	-1.596	1	0.01	0.01	0.04	
1F	0	3.917	3.819	0.050	0.000	0.027	-2.558	1	0.01	0.01	0.07	
1G	0	3.917	2.583	-0.057	0.000	-0.016	-1.596	1	0.01	0.01	0.04	
1H	0	3.917	3.819	-0.057	0.000	-0.016	-2.558	1	0.01	0.01	0.07	
1I	0	-1.026	2.616	0.073	0.000	0.047	-1.626	1	0.01	0.00	0.04	
1J	0	-1.026	3.786	0.073	0.000	0.047	-2.528	1	0.01	0.00	0.06	
1K	0	-1.026	2.616	-0.080	0.000	-0.036	-1.626	4	0.01	0.00	0.08	
1L	0	-1.026	3.786	-0.080	0.000	-0.036	-2.528	4	0.01	0.00	0.11	
1M	0	3.744	2.616	0.073	0.000	0.047	-1.626	1	0.01	0.01	0.05	
1N	0	3.744	3.786	0.073	0.000	0.047	-2.528	1	0.01	0.01	0.07	
1O	0	3.744	2.616	-0.080	0.000	-0.036	-1.626	4	0.01	0.01	0.08	
1P	0	3.744	3.786	-0.080	0.000	-0.036	-2.528	4	0.01	0.01	0.12	
2	0	1.500	5.384	-0.014	0.000	0.001	-3.615	1	0.02	0.00	0.09	
7	0	1.776	4.125	0.081	0.000	0.052	-2.603	1	0.01	0.00	0.07	
1A	45	-1.199	2.036	0.050	0.000	0.004	-0.560	4	0.01	0.00	0.03	
1B	45	-1.199	3.271	0.050	0.000	0.004	-0.960	4	0.01	0.00	0.04	
1C	45	-1.199	2.036	-0.057	0.000	0.010	-0.560	1	0.01	0.00	0.02	
1D	45	-1.199	3.271	-0.057	0.000	0.010	-0.960	1	0.01	0.00	0.02	
1E	45	3.917	2.036	0.050	0.000	0.004	-0.560	3	0.01	0.01	0.03	
1F	45	3.917	3.271	0.050	0.000	0.004	-0.960	3	0.01	0.01	0.05	
1G	45	3.917	2.036	-0.057	0.000	0.010	-0.560	3	0.01	0.01	0.03	
1H	45	3.917	3.271	-0.057	0.000	0.010	-0.960	3	0.01	0.01	0.05	
1I	45	-1.026	2.068	0.073	0.000	0.013	-0.576	1	0.01	0.00	0.02	
1J	45	-1.026	3.239	0.073	0.000	0.013	-0.943	1	0.01	0.00	0.02	
1K	45	-1.026	2.068	-0.080	0.000	0.001	-0.576	4	0.01	0.00	0.03	
1L	45	-1.026	3.239	-0.080	0.000	0.001	-0.943	4	0.01	0.00	0.04	
1M	45	3.744	2.068	0.073	0.000	0.013	-0.576	3	0.01	0.01	0.03	
1N	45	3.744	3.239	0.073	0.000	0.013	-0.943	3	0.01	0.01	0.05	
1O	45	3.744	2.068	-0.080	0.000	0.001	-0.576	3	0.01	0.01	0.03	
1P	45	3.744	3.239	-0.080	0.000	0.001	-0.943	3	0.01	0.01	0.04	
2	45	1.500	4.672	-0.014	0.000	0.007	-1.352	1	0.02	0.00	0.03	
7	45	1.776	3.413	0.081	0.000	0.015	-0.907	1	0.01	0.00	0.02	
1A	90	-1.199	1.488	0.050	0.000	-0.019	0.230	4	0.00	0.00	0.02	
1B	90	-1.199	2.724	0.050	0.000	-0.019	0.392	4	0.01	0.00	0.03	
1C	90	-1.199	1.488	-0.057	0.000	0.037	0.230	1	0.00	0.00	0.01	
1D	90	-1.199	2.724	-0.057	0.000	0.037	0.392	1	0.01	0.00	0.01	
1E	90	3.917	1.488	0.050	0.000	-0.019	0.230	3	0.00	0.01	0.02	
1F	90	3.917	2.724	0.050	0.000	-0.019	0.392	4	0.01	0.01	0.03	
1G	90	3.917	1.488	-0.057	0.000	0.037	0.230	3	0.00	0.01	0.02	
1H	90	3.917	2.724	-0.057	0.000	0.037	0.392	4	0.01	0.01	0.03	
1I	90	-1.026	1.521	0.073	0.000	-0.020	0.227	4	0.01	0.00	0.02	
1J	90	-1.026	2.691	0.073	0.000	-0.020	0.395	4	0.01	0.00	0.03	
1K	90	-1.026	1.521	-0.080	0.000	0.037	0.227	1	0.01	0.00	0.01	
1L	90	-1.026	2.691	-0.080	0.000	0.037	0.395	1	0.01	0.00	0.01	
1M	90	3.744	1.521	0.073	0.000	-0.020	0.227	3	0.01	0.01	0.02	
1N	90	3.744	2.691	0.073	0.000	-0.020	0.395	4	0.01	0.01	0.03	
1O	90	3.744	1.521	-0.080	0.000	0.037	0.227	3	0.01	0.01	0.02	
1P	90	3.744	2.691	-0.080	0.000	0.037	0.395	4	0.01	0.01	0.03	
2	90	1.500	3.959	-0.014	0.000	0.013	0.590	1	0.01	0.00	0.02	
7	90	1.776	2.701	0.081	0.000	-0.021	0.469	4	0.01	0.00	0.04	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χ <sub>LT</sub>	I.S.n.	I.S.m.	I.S.	Nota	
--	kN					kN*m								
1A	-1.199	0.027	-1.596	4	0.6449	0.9988	1.0004	--	--	0.00	--	0.11	Snell.imin=	46
1B	-1.199	0.027	-2.558	4	0.6449	0.9988	1.0003	--	--	0.00	--	0.17	Snell.imin=	46
1C	-1.199	0.037	-1.596	4	0.6449	0.9996	1.0004	--	--	0.00	--	0.11	Snell.imin=	46
1D	-1.199	0.037	-2.558	4	0.6449	0.9996	1.0003	--	--	0.00	--	0.17	Snell.imin=	46
1E	3.917	0.027	-1.596	3	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1F	3.917	0.027	-2.558	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1G	3.917	0.037	-1.596	3	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1H	3.917	0.037	-2.558	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1I	-1.026	0.047	-1.626	4	0.6449	0.9997	1.0004	--	--	0.00	--	0.11	Snell.imin=	46
1J	-1.026	0.047	-2.528	4	0.6449	0.9997	1.0003	--	--	0.00	--	0.17	Snell.imin=	46
1K	-1.026	0.037	-1.626	4	0.6449	0.9984	1.0004	--	--	0.00	--	0.11	Snell.imin=	46
1L	-1.026	0.037	-2.528	4	0.6449	0.9984	1.0003	--	--	0.00	--	0.16	Snell.imin=	46
1M	3.744	0.047	-1.626	3	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1N	3.744	0.047	-2.528	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1O	3.744	0.037	-1.626	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
1P	3.744	0.037	-2.528	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
2	1.500	0.013	-3.615	1	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46
7	1.776	0.052	-2.603	4	0.6449	0.0000	0.0000	--	--	--	--	--	Snell.imin=	46

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

**ASTA NUM. 37** NI 125 NF 126 Lungh. 109.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.22 1.13 2.00 3.34 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-4.319	1.667	0.054	0.000	0.023	-0.029	4	0.01	0.01	0.01	
1B	0	-4.319	1.985	0.054	0.000	0.023	-0.186	4	0.01	0.01	0.02	
1C	0	-4.319	1.667	-0.052	0.000	-0.038	-0.029	4	0.01	0.01	0.02	
1D	0	-4.319	1.985	-0.052	0.000	-0.038	-0.186	4	0.01	0.01	0.03	
1E	0	1.007	1.667	0.054	0.000	0.023	-0.029	1	0.01	0.00	0.00	
1F	0	1.007	1.985	0.054	0.000	0.023	-0.186	3	0.01	0.00	0.01	
1G	0	1.007	1.667	-0.052	0.000	-0.038	-0.029	4	0.01	0.00	0.01	
1H	0	1.007	1.985	-0.052	0.000	-0.038	-0.186	4	0.01	0.00	0.02	
1I	0	-3.378	1.665	0.076	0.000	0.046	-0.030	4	0.01	0.01	0.01	
1J	0	-3.378	1.987	0.076	0.000	0.046	-0.185	3	0.01	0.00	0.02	
1K	0	-3.378	1.665	-0.073	0.000	-0.060	-0.030	4	0.01	0.01	0.02	
1L	0	-3.378	1.987	-0.073	0.000	-0.060	-0.185	4	0.01	0.01	0.03	
1M	0	0.066	1.665	0.076	0.000	0.046	-0.030	1	0.01	0.00	0.00	
1N	0	0.066	1.987	0.076	0.000	0.046	-0.185	1	0.01	0.00	0.01	
1O	0	0.066	1.665	-0.073	0.000	-0.060	-0.030	4	0.01	0.00	0.01	
1P	0	0.066	1.987	-0.073	0.000	-0.060	-0.185	4	0.01	0.00	0.02	
2	0	-2.324	3.419	-0.002	0.000	-0.015	-0.202	4	0.01	0.00	0.02	
7	0	-1.036	1.492	-0.087	0.000	-0.074	-0.027	4	0.00	0.00	0.02	
1A	55	-4.319	0.281	0.054	0.000	-0.007	0.501	4	0.00	0.01	0.04	
1B	55	-4.319	0.600	0.054	0.000	-0.007	0.519	4	0.00	0.01	0.04	
1C	55	-4.319	0.281	-0.052	0.000	-0.009	0.501	4	0.00	0.01	0.04	
1D	55	-4.319	0.600	-0.052	0.000	-0.009	0.519	4	0.00	0.01	0.04	
1E	55	1.007	0.281	0.054	0.000	-0.007	0.501	1	0.00	0.00	0.01	
1F	55	1.007	0.600	0.054	0.000	-0.007	0.519	1	0.00	0.00	0.01	
1G	55	1.007	0.281	-0.052	0.000	-0.009	0.501	4	0.00	0.00	0.03	
1H	55	1.007	0.600	-0.052	0.000	-0.009	0.519	4	0.00	0.00	0.04	
1I	55	-3.378	0.279	0.076	0.000	0.004	0.499	4	0.00	0.01	0.03	
1J	55	-3.378	0.602	0.076	0.000	0.004	0.522	4	0.00	0.01	0.03	
1K	55	-3.378	0.279	-0.073	0.000	-0.020	0.499	4	0.00	0.01	0.04	
1L	55	-3.378	0.602	-0.073	0.000	-0.020	0.522	4	0.00	0.01	0.04	
1M	55	0.066	0.279	0.076	0.000	0.004	0.499	1	0.00	0.00	0.01	
1N	55	0.066	0.602	0.076	0.000	0.004	0.522	1	0.00	0.00	0.01	
1O	55	0.066	0.279	-0.073	0.000	-0.020	0.499	4	0.00	0.00	0.03	
1P	55	0.066	0.602	-0.073	0.000	-0.020	0.522	4	0.00	0.00	0.04	
2	55	-2.324	0.834	-0.002	0.000	-0.014	0.957	4	0.00	0.00	0.06	
7	55	-1.036	0.541	-0.087	0.000	-0.026	0.527	4	0.00	0.00	0.04	
1A	109	-4.319	-1.105	0.054	0.000	-0.037	0.276	4	0.00	0.01	0.03	
1B	109	-4.319	-0.786	0.054	0.000	-0.037	0.469	4	0.00	0.01	0.04	
1C	109	-4.319	-1.105	-0.052	0.000	0.019	0.276	4	0.00	0.01	0.02	
1D	109	-4.319	-0.786	-0.052	0.000	0.019	0.469	4	0.00	0.01	0.03	
1E	109	1.007	-1.105	0.054	0.000	-0.037	0.276	4	0.00	0.00	0.02	
1F	109	1.007	-0.786	0.054	0.000	-0.037	0.469	4	0.00	0.00	0.04	
1G	109	1.007	-1.105	-0.052	0.000	0.019	0.276	1	0.00	0.00	0.01	
1H	109	1.007	-0.786	-0.052	0.000	0.019	0.469	1	0.00	0.00	0.01	
1I	109	-3.378	-1.107	0.076	0.000	-0.037	0.273	4	0.00	0.01	0.03	
1J	109	-3.378	-0.784	0.076	0.000	-0.037	0.472	4	0.00	0.01	0.04	
1K	109	-3.378	-1.107	-0.073	0.000	0.020	0.273	4	0.00	0.01	0.02	
1L	109	-3.378	-0.784	-0.073	0.000	0.020	0.472	4	0.00	0.01	0.03	
1M	109	0.066	-1.107	0.076	0.000	-0.037	0.273	4	0.00	0.00	0.02	
1N	109	0.066	-0.784	0.076	0.000	-0.037	0.472	4	0.00	0.00	0.04	
1O	109	0.066	-1.107	-0.073	0.000	0.020	0.273	1	0.00	0.00	0.01	
1P	109	0.066	-0.784	-0.073	0.000	0.020	0.472	1	0.00	0.00	0.01	
2	109	-2.324	-1.752	-0.002	0.000	-0.013	0.707	4	0.01	0.00	0.05	
7	109	-1.036	-0.409	-0.087	0.000	0.021	0.563	1	0.00	0.00	0.02	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	kN		kN*m										
1A	-4.319	-0.037	0.501	4	0.6292	0.9954	1.0111	--	--	0.01	--	0.04	Snell.imin= 56
1B	-4.319	-0.037	0.519	4	0.6292	0.9954	1.0088	--	--	0.01	--	0.05	Snell.imin= 56
1C	-4.319	-0.038	0.501	4	0.6292	0.9970	1.0111	--	--	0.01	--	0.05	Snell.imin= 56
1D	-4.319	-0.038	0.519	4	0.6292	0.9970	1.0088	--	--	0.01	--	0.05	Snell.imin= 56
1E	1.007	-0.037	0.501	4	0.6292	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1F	1.007	-0.037	0.519	4	0.6292	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1G	1.007	-0.038	0.501	4	0.6292	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1H	1.007	-0.038	0.519	4	0.6292	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1I	-3.378	0.046	0.499	4	0.6292	0.9944	1.0087	--	--	0.01	--	0.04	Snell.imin= 56
1J	-3.378	0.046	0.522	4	0.6292	0.9944	1.0068	--	--	0.01	--	0.04	Snell.imin= 56
1K	-3.378	-0.060	0.499	4	0.6292	0.9995	1.0087	--	--	0.01	--	0.05	Snell.imin= 56
1L	-3.378	-0.060	0.522	4	0.6292	0.9995	1.0068	--	--	0.01	--	0.05	Snell.imin= 56
1M	0.066	0.046	0.499	4	0.6292	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1N	0.066	0.046	0.522	4	0.6292	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1O	0.066	-0.060	0.499	4	0.6292	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1P	0.066	-0.060	0.522	4	0.6292	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
2	-2.324	-0.015	0.957	4	0.6292	1.0084	1.0029	--	--	0.01	--	0.07	Snell.imin= 56
7	-1.036	-0.074	0.563	4	0.6292	1.0000	1.0024	--	--	0.00	--	0.05	Snell.imin= 56

**ASTA NUM. 38** NI 123 NF 124 Lungh. 109.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.22 0.13 2.00 2.34 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
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# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

	cm	kN			kN*m						
1A	0	-0.255	0.233	0.439	0.000	0.274	0.517	1	0.00	0.00	0.03
1B	0	-0.255	0.520	0.439	0.000	0.274	0.330	1	0.00	0.00	0.03
1C	0	-0.255	0.233	-0.022	0.000	-0.010	0.517	4	0.00	0.00	0.03
1D	0	-0.255	0.520	-0.022	0.000	-0.010	0.330	4	0.00	0.00	0.02
1E	0	2.703	0.233	0.439	0.000	0.274	0.517	1	0.00	0.01	0.04
1F	0	2.703	0.520	0.439	0.000	0.274	0.330	4	0.00	0.01	0.04
1G	0	2.703	0.233	-0.022	0.000	-0.010	0.517	1	0.00	0.01	0.02
1H	0	2.703	0.520	-0.022	0.000	-0.010	0.330	4	0.00	0.01	0.03
1I	0	-2.388	0.222	0.507	0.000	0.331	0.525	1	0.00	0.00	0.04
1J	0	-2.388	0.532	0.507	0.000	0.331	0.322	4	0.00	0.00	0.04
1K	0	-2.388	0.222	-0.091	0.000	-0.067	0.525	4	0.00	0.00	0.05
1L	0	-2.388	0.532	-0.091	0.000	-0.067	0.322	4	0.00	0.00	0.03
1M	0	4.836	0.222	0.507	0.000	0.331	0.525	4	0.00	0.01	0.06
1N	0	4.836	0.532	0.507	0.000	0.331	0.322	3	0.00	0.01	0.08
1O	0	4.836	0.222	-0.091	0.000	-0.067	0.525	4	0.00	0.01	0.05
1P	0	4.836	0.532	-0.091	0.000	-0.067	0.322	4	0.00	0.01	0.04
2	0	1.950	0.979	0.308	0.000	0.202	0.819	1	0.00	0.00	0.04
7	0	5.974	-0.288	0.522	0.000	0.351	0.605	4	0.00	0.01	0.07

1A	55	-0.255	-0.607	0.439	0.000	0.035	0.413	1	0.00	0.00	0.01
1B	55	-0.255	-0.320	0.439	0.000	0.035	0.387	1	0.00	0.00	0.01
1C	55	-0.255	-0.607	-0.022	0.000	0.003	0.413	1	0.00	0.00	0.01
1D	55	-0.255	-0.320	-0.022	0.000	0.003	0.387	1	0.00	0.00	0.01
1E	55	2.703	-0.607	0.439	0.000	0.035	0.413	1	0.00	0.01	0.02
1F	55	2.703	-0.320	0.439	0.000	0.035	0.387	4	0.00	0.01	0.03
1G	55	2.703	-0.607	-0.022	0.000	0.003	0.413	1	0.00	0.01	0.01
1H	55	2.703	-0.320	-0.022	0.000	0.003	0.387	4	0.00	0.01	0.03
1I	55	-2.388	-0.619	0.507	0.000	0.054	0.416	1	0.00	0.00	0.02
1J	55	-2.388	-0.308	0.507	0.000	0.054	0.384	1	0.00	0.00	0.02
1K	55	-2.388	-0.619	-0.091	0.000	-0.017	0.416	4	0.00	0.00	0.03
1L	55	-2.388	-0.308	-0.091	0.000	-0.017	0.384	4	0.00	0.00	0.03
1M	55	4.836	-0.619	0.507	0.000	0.054	0.416	4	0.00	0.01	0.04
1N	55	4.836	-0.308	0.507	0.000	0.054	0.384	4	0.00	0.01	0.03
1O	55	4.836	-0.619	-0.091	0.000	-0.017	0.416	4	0.00	0.01	0.04
1P	55	4.836	-0.308	-0.091	0.000	-0.017	0.384	4	0.00	0.01	0.03
2	55	1.950	-0.899	0.308	0.000	0.034	0.841	1	0.00	0.00	0.02
7	55	5.974	-0.531	0.522	0.000	0.067	0.382	3	0.00	0.01	0.04

1A	109	-0.255	-1.447	0.439	0.000	-0.204	-0.148	4	0.00	0.00	0.04
1B	109	-0.255	-1.161	0.439	0.000	-0.204	-0.015	4	0.00	0.00	0.04
1C	109	-0.255	-1.447	-0.022	0.000	0.015	-0.148	1	0.00	0.00	0.00
1D	109	-0.255	-1.161	-0.022	0.000	0.015	-0.015	3	0.00	0.00	0.00
1E	109	2.703	-1.447	0.439	0.000	-0.204	-0.148	4	0.00	0.01	0.05
1F	109	2.703	-1.161	0.439	0.000	-0.204	-0.015	4	0.00	0.01	0.04
1G	109	2.703	-1.447	-0.022	0.000	0.015	-0.148	3	0.00	0.01	0.01
1H	109	2.703	-1.161	-0.022	0.000	0.015	-0.015	1	0.00	0.01	0.01
1I	109	-2.388	-1.459	0.507	0.000	-0.222	-0.151	4	0.00	0.00	0.05
1J	109	-2.388	-1.149	0.507	0.000	-0.222	-0.012	4	0.00	0.00	0.05
1K	109	-2.388	-1.459	-0.091	0.000	0.033	-0.151	3	0.00	0.00	0.02
1L	109	-2.388	-1.149	-0.091	0.000	0.033	-0.012	4	0.00	0.00	0.01
1M	109	4.836	-1.459	0.507	0.000	-0.222	-0.151	4	0.00	0.01	0.05
1N	109	4.836	-1.149	0.507	0.000	-0.222	-0.012	4	0.00	0.01	0.05
1O	109	4.836	-1.459	-0.091	0.000	0.033	-0.151	1	0.00	0.01	0.01
1P	109	4.836	-1.149	-0.091	0.000	0.033	-0.012	1	0.00	0.01	0.01
2	109	1.950	-2.776	0.308	0.000	-0.134	-0.160	4	0.01	0.00	0.03
7	109	5.974	-0.773	0.522	0.000	-0.218	0.026	4	0.00	0.01	0.05

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	kN	kN*m											
1A	-0.255	0.274	0.517	4	0.6020	0.9997	1.0003	--	--	0.00	--	0.08	Snell.imin= 56
1B	-0.255	0.274	0.387	4	0.6020	0.9997	1.0005	--	--	0.00	--	0.07	Snell.imin= 56
1C	-0.255	0.015	0.517	4	0.6020	0.9998	1.0003	--	--	0.00	--	0.04	Snell.imin= 56
1D	-0.255	0.015	0.387	4	0.6020	0.9998	1.0005	--	--	0.00	--	0.03	Snell.imin= 56
1E	2.703	0.274	0.517	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1F	2.703	0.274	0.387	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1G	2.703	0.015	0.517	3	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1H	2.703	0.015	0.387	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1I	-2.388	0.331	0.525	4	0.6020	0.9975	1.0030	--	--	0.01	--	0.10	Snell.imin= 56
1J	-2.388	0.331	0.384	4	0.6020	0.9975	1.0049	--	--	0.01	--	0.09	Snell.imin= 56
1K	-2.388	-0.067	0.525	4	0.6020	0.9986	1.0030	--	--	0.01	--	0.05	Snell.imin= 56
1L	-2.388	-0.067	0.384	4	0.6020	0.9986	1.0049	--	--	0.01	--	0.04	Snell.imin= 56
1M	4.836	0.331	0.525	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1N	4.836	0.331	0.384	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1O	4.836	-0.067	0.525	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
1P	4.836	-0.067	0.384	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
2	1.950	0.202	0.841	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56
7	5.974	0.351	0.605	4	0.6020	0.0000	0.0000	--	--	--	--	--	Snell.imin= 56

**ASTA NUM. 39** NI 127 NF 123 Lungh. 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.22 1.13 2.00 3.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							
1A	0	-7.499	5.720	3.880	0.000	0.624	-3.528	1	0.03	0.01	0.14	
1B	0	-7.499	7.432	3.880	0.000	0.624	-4.920	1	0.03	0.01	0.17	
1C	0	-7.499	5.720	-4.563	0.000	-0.253	-3.528	4	0.03	0.01	0.22	
1D	0	-7.499	7.432	-4.563	0.000	-0.253	-4.920	4	0.03	0.01	0.27	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1E	0	4.511	5.720	3.880	0.000	0.624	-3.528	1	0.03	0.01	0.13	
1F	0	4.511	7.432	3.880	0.000	0.624	-4.920	1	0.03	0.01	0.17	
1G	0	4.511	5.720	-4.563	0.000	-0.253	-3.528	4	0.03	0.01	0.20	
1H	0	4.511	7.432	-4.563	0.000	-0.253	-4.920	4	0.03	0.01	0.25	
1I	0	-8.188	6.003	5.372	0.000	1.074	-3.607	1	0.04	0.01	0.17	
1J	0	-8.188	7.149	5.372	0.000	1.074	-4.841	1	0.04	0.01	0.20	
1K	0	-8.188	6.003	-6.055	0.000	-0.703	-3.607	4	0.04	0.01	0.30	
1L	0	-8.188	7.149	-6.055	0.000	-0.703	-4.841	4	0.04	0.01	0.35	
1M	0	5.200	6.003	5.372	0.000	1.074	-3.607	1	0.04	0.01	0.17	
1N	0	5.200	7.149	5.372	0.000	1.074	-4.841	1	0.04	0.01	0.20	
1O	0	5.200	6.003	-6.055	0.000	-0.703	-3.607	4	0.04	0.01	0.28	
1P	0	5.200	7.149	-6.055	0.000	-0.703	-4.841	4	0.04	0.01	0.33	
2	0	-1.033	12.600	-0.140	0.000	0.333	-7.935	1	0.04	0.00	0.21	
7	0	2.826	6.289	6.320	0.000	1.316	-4.017	1	0.05	0.01	0.19	
1A	5	-7.499	5.592	3.880	0.000	0.533	-3.239	1	0.03	0.01	0.12	
1B	5	-7.499	7.305	3.880	0.000	0.533	-4.558	1	0.03	0.01	0.16	
1C	5	-7.499	5.592	-4.563	0.000	-0.127	-3.239	4	0.03	0.01	0.18	
1D	5	-7.499	7.305	-4.563	0.000	-0.127	-4.558	4	0.03	0.01	0.24	
1E	5	4.511	5.592	3.880	0.000	0.533	-3.239	1	0.03	0.01	0.12	
1F	5	4.511	7.305	3.880	0.000	0.533	-4.558	1	0.03	0.01	0.15	
1G	5	4.511	5.592	-4.563	0.000	-0.127	-3.239	4	0.03	0.01	0.16	
1H	5	4.511	7.305	-4.563	0.000	-0.127	-4.558	4	0.03	0.01	0.22	
1I	5	-8.188	5.875	5.372	0.000	0.841	-3.305	1	0.04	0.01	0.15	
1J	5	-8.188	7.022	5.372	0.000	0.841	-4.492	1	0.04	0.01	0.18	
1K	5	-8.188	5.875	-6.055	0.000	-0.435	-3.305	4	0.04	0.01	0.24	
1L	5	-8.188	7.022	-6.055	0.000	-0.435	-4.492	4	0.04	0.01	0.29	
1M	5	5.200	5.875	5.372	0.000	0.841	-3.305	1	0.04	0.01	0.15	
1N	5	5.200	7.022	5.372	0.000	0.841	-4.492	1	0.04	0.01	0.17	
1O	5	5.200	5.875	-6.055	0.000	-0.435	-3.305	4	0.04	0.01	0.22	
1P	5	5.200	7.022	-6.055	0.000	-0.435	-4.492	4	0.04	0.01	0.27	
2	5	-1.033	12.360	-0.140	0.000	0.340	-7.311	1	0.04	0.00	0.20	
7	5	2.826	6.202	6.320	0.000	1.000	-3.705	1	0.05	0.01	0.16	
1A	10	-7.499	5.465	3.880	0.000	0.441	-2.956	1	0.03	0.01	0.11	
1B	10	-7.499	7.177	3.880	0.000	0.441	-4.202	1	0.03	0.01	0.14	
1C	10	-7.499	5.465	-4.563	0.000	-0.002	-2.956	4	0.03	0.01	0.15	
1D	10	-7.499	7.177	-4.563	0.000	-0.002	-4.202	4	0.03	0.01	0.20	
1E	10	4.511	5.465	3.880	0.000	0.441	-2.956	1	0.03	0.01	0.11	
1F	10	4.511	7.177	3.880	0.000	0.441	-4.202	1	0.03	0.01	0.14	
1G	10	4.511	5.465	-4.563	0.000	-0.002	-2.956	1	0.03	0.01	0.08	
1H	10	4.511	7.177	-4.563	0.000	-0.002	-4.202	1	0.03	0.01	0.10	
1I	10	-8.188	5.748	5.372	0.000	0.607	-3.010	1	0.04	0.01	0.13	
1J	10	-8.188	6.894	5.372	0.000	0.607	-4.148	1	0.04	0.01	0.15	
1K	10	-8.188	5.748	-6.055	0.000	-0.168	-3.010	4	0.04	0.01	0.18	
1L	10	-8.188	6.894	-6.055	0.000	-0.168	-4.148	4	0.04	0.01	0.23	
1M	10	5.200	5.748	5.372	0.000	0.607	-3.010	1	0.04	0.01	0.12	
1N	10	5.200	6.894	5.372	0.000	0.607	-4.148	1	0.04	0.01	0.15	
1O	10	5.200	5.748	-6.055	0.000	-0.168	-3.010	4	0.04	0.01	0.16	
1P	10	5.200	6.894	-6.055	0.000	-0.168	-4.148	4	0.04	0.01	0.21	
2	10	-1.033	12.120	-0.140	0.000	0.347	-6.699	1	0.04	0.00	0.18	
7	10	2.826	6.115	6.320	0.000	0.684	-3.397	1	0.05	0.01	0.13	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	-----	-----	-----										
	kN	kN*m											
1A	-7.499	0.624	-3.528	1	0.8236	0.9921	1.0004	--	--	0.01	--	0.14	Snell.imin= 5
1B	-7.499	0.624	-4.920	1	0.8236	0.9921	1.0005	--	--	0.01	--	0.17	Snell.imin= 5
1C	-7.499	-0.253	-3.528	4	0.8236	1.0026	1.0093	--	--	0.01	--	0.20	Snell.imin= 5
1D	-7.499	-0.253	-4.920	4	0.8236	1.0026	1.0095	--	--	0.01	--	0.26	Snell.imin= 5
1E	4.511	0.624	-3.528	1	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1F	4.511	0.624	-4.920	1	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1G	4.511	-0.253	-3.528	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1H	4.511	-0.253	-4.920	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1I	-8.188	1.074	-3.607	1	0.8236	0.9901	1.0004	--	--	0.01	--	0.18	Snell.imin= 5
1J	-8.188	1.074	-4.841	1	0.8236	0.9901	1.0006	--	--	0.01	--	0.20	Snell.imin= 5
1K	-8.188	-0.703	-3.607	4	0.8236	1.0050	1.0101	--	--	0.01	--	0.29	Snell.imin= 5
1L	-8.188	-0.703	-4.841	4	0.8236	1.0050	1.0104	--	--	0.01	--	0.34	Snell.imin= 5
1M	5.200	1.074	-3.607	1	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1N	5.200	1.074	-4.841	1	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1O	5.200	-0.703	-3.607	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1P	5.200	-0.703	-4.841	4	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
2	-1.033	0.347	-7.935	1	0.8236	0.9992	1.0001	--	--	0.00	--	0.21	Snell.imin= 5
7	2.826	1.316	-4.017	1	0.8236	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5

ASTA NUM. 40 NI 84 NF 127 Lung. 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.22 1.13 2.00 3.34 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	-----	-----	-----	-----	-----	-----	-----					
	cm	kN			kN*m							
1A	0	-9.073	-21.882	6.331	0.000	0.411	-4.271	1	0.07	0.01	0.14	
1B	0	-9.073	-12.878	6.331	0.000	0.411	-6.161	1	0.05	0.01	0.19	
1C	0	-9.073	-21.882	-1.761	0.000	-0.626	-4.271	4	0.07	0.02	0.32	
1D	0	-9.073	-12.878	-1.761	0.000	-0.626	-6.161	4	0.04	0.02	0.40	
1E	0	2.519	-21.882	6.331	0.000	0.411	-4.271	1	0.07	0.01	0.13	
1F	0	2.519	-12.878	6.331	0.000	0.411	-6.161	1	0.05	0.01	0.18	
1G	0	2.519	-21.882	-1.761	0.000	-0.626	-4.271	4	0.07	0.01	0.29	
1H	0	2.519	-12.878	-1.761	0.000	-0.626	-6.161	4	0.04	0.01	0.37	
1I	0	-8.197	-19.876	9.226	0.000	0.770	-4.293	1	0.07	0.01	0.17	
1J	0	-8.197	-14.885	9.226	0.000	0.770	-6.139	1	0.07	0.01	0.21	
1K	0	-8.197	-19.876	-4.656	0.000	-0.984	-4.293	4	0.07	0.01	0.38	
1L	0	-8.197	-14.885	-4.656	0.000	-0.984	-6.139	4	0.05	0.01	0.45	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1M	0	1.643	-19.876	9.226	0.000	0.770	-4.293	1	0.07	0.00	0.16	
1N	0	1.643	-14.885	9.226	0.000	0.770	-6.139	1	0.07	0.00	0.20	
1O	0	1.643	-19.876	-4.656	0.000	-0.984	-4.293	4	0.07	0.00	0.35	
1P	0	1.643	-14.885	-4.656	0.000	-0.984	-6.139	4	0.05	0.00	0.43	
2	0	-4.128	-37.140	7.600	0.000	-0.030	-9.391	4	0.12	0.01	0.41	
7	0	-3.934	-32.320	11.830	0.000	0.117	-9.700	1	0.11	0.01	0.24	
1A	5	-9.073	-22.012	6.331	0.000	0.242	-5.161	1	0.07	0.01	0.15	
1B	5	-9.073	-13.008	6.331	0.000	0.242	-7.016	1	0.05	0.01	0.19	
1C	5	-9.073	-22.012	-1.761	0.000	-0.685	-5.161	4	0.07	0.02	0.36	
1D	5	-9.073	-13.008	-1.761	0.000	-0.685	-7.016	4	0.04	0.02	0.44	
1E	5	2.519	-22.012	6.331	0.000	0.242	-5.161	1	0.07	0.01	0.14	
1F	5	2.519	-13.008	6.331	0.000	0.242	-7.016	1	0.05	0.01	0.18	
1G	5	2.519	-22.012	-1.761	0.000	-0.685	-5.161	4	0.07	0.01	0.34	
1H	5	2.519	-13.008	-1.761	0.000	-0.685	-7.016	4	0.04	0.01	0.41	
1I	5	-8.197	-20.006	9.226	0.000	0.617	-5.149	1	0.07	0.01	0.18	
1J	5	-8.197	-15.014	9.226	0.000	0.617	-7.028	1	0.07	0.01	0.22	
1K	5	-8.197	-20.006	-4.656	0.000	-1.059	-5.149	4	0.07	0.01	0.43	
1L	5	-8.197	-15.014	-4.656	0.000	-1.059	-7.028	4	0.05	0.01	0.50	
1M	5	1.643	-20.006	9.226	0.000	0.617	-5.149	1	0.07	0.00	0.17	
1N	5	1.643	-15.014	9.226	0.000	0.617	-7.028	1	0.07	0.00	0.21	
1O	5	1.643	-20.006	-4.656	0.000	-1.059	-5.149	4	0.07	0.00	0.40	
1P	5	1.643	-15.014	-4.656	0.000	-1.059	-7.028	4	0.05	0.00	0.48	
2	5	-4.128	-37.375	7.600	0.000	-0.410	-11.255	4	0.12	0.01	0.55	
7	5	-3.934	-32.410	11.830	0.000	-0.474	-11.318	4	0.11	0.01	0.56	
1A	10	-9.073	-22.142	6.331	0.000	0.074	-6.057	1	0.07	0.01	0.16	
1B	10	-9.073	-13.138	6.331	0.000	0.074	-7.877	1	0.05	0.01	0.20	
1C	10	-9.073	-22.142	-1.761	0.000	-0.745	-6.057	4	0.07	0.02	0.41	
1D	10	-9.073	-13.138	-1.761	0.000	-0.745	-7.877	4	0.04	0.02	0.49	
1E	10	2.519	-22.142	6.331	0.000	0.074	-6.057	1	0.07	0.01	0.15	
1F	10	2.519	-13.138	6.331	0.000	0.074	-7.877	1	0.05	0.01	0.19	
1G	10	2.519	-22.142	-1.761	0.000	-0.745	-6.057	4	0.07	0.01	0.38	
1H	10	2.519	-13.138	-1.761	0.000	-0.745	-7.877	4	0.04	0.01	0.46	
1I	10	-8.197	-20.135	9.226	0.000	0.463	-6.010	1	0.07	0.01	0.18	
1J	10	-8.197	-15.144	9.226	0.000	0.463	-7.924	1	0.07	0.01	0.23	
1K	10	-8.197	-20.135	-4.656	0.000	-1.134	-6.010	4	0.07	0.01	0.48	
1L	10	-8.197	-15.144	-4.656	0.000	-1.134	-7.924	4	0.05	0.01	0.55	
1M	10	1.643	-20.135	9.226	0.000	0.463	-6.010	1	0.07	0.00	0.18	
1N	10	1.643	-15.144	9.226	0.000	0.463	-7.924	1	0.07	0.00	0.22	
1O	10	1.643	-20.135	-4.656	0.000	-1.134	-6.010	4	0.07	0.00	0.45	
1P	10	1.643	-15.144	-4.656	0.000	-1.134	-7.924	4	0.05	0.00	0.53	
2	10	-4.128	-37.610	7.600	0.000	-0.791	-13.130	4	0.12	0.01	0.70	
7	10	-3.934	-32.500	11.830	0.000	-1.066	-12.940	4	0.11	0.01	0.74	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN		kN*m										
1A	-9.073	0.411	-6.057	1	0.8236	0.9872	0.9991	--	--	0.01	--	0.19	Snell.imin= 5
1B	-9.073	0.411	-7.877	1	0.8236	0.9872	0.9999	--	--	0.01	--	0.23	Snell.imin= 5
1C	-9.073	-0.745	-6.057	4	0.8258	1.0150	1.0125	--	--	0.02	--	0.42	Snell.imin= 5
1D	-9.073	-0.745	-7.877	4	0.8258	1.0150	1.0135	--	--	0.02	--	0.50	Snell.imin= 5
1E	2.519	0.411	-6.057	1	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1F	2.519	0.411	-7.877	1	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1G	2.519	-0.745	-6.057	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1H	2.519	-0.745	-7.877	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1I	-8.197	0.770	-6.010	1	0.8236	0.9904	0.9993	--	--	0.01	--	0.21	Snell.imin= 5
1J	-8.197	0.770	-7.924	1	0.8236	0.9904	0.9998	--	--	0.01	--	0.25	Snell.imin= 5
1K	-8.197	-1.134	-6.010	4	0.8258	1.0139	1.0114	--	--	0.02	--	0.48	Snell.imin= 5
1L	-8.197	-1.134	-7.924	4	0.8258	1.0139	1.0121	--	--	0.02	--	0.56	Snell.imin= 5
1M	1.643	0.770	-6.010	1	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1N	1.643	0.770	-7.924	1	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1O	1.643	-1.134	-6.010	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1P	1.643	-1.134	-7.924	4	0.8258	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
2	-4.128	-0.791	-13.130	4	0.8258	1.0020	1.0058	--	--	0.01	--	0.70	Snell.imin= 5
7	-3.934	-1.066	-12.940	4	0.8258	1.0010	1.0057	--	--	0.01	--	0.74	Snell.imin= 5

ASTA NUM. 41 NI 171 NF 124 Lunghezza 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.  
qy medio: 0.22 1.00 1.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-1.794	4.158	0.342	0.000	0.020	-1.989	1	0.01	0.00	0.05	
1B	0	-1.794	6.130	0.342	0.000	0.020	-3.059	1	0.02	0.00	0.08	
1C	0	-1.794	4.158	-6.320	0.000	-0.418	-1.989	4	0.05	0.00	0.16	
1D	0	-1.794	6.130	-6.320	0.000	-0.418	-3.059	4	0.05	0.00	0.21	
1E	0	7.838	4.158	0.342	0.000	0.020	-1.989	3	0.01	0.02	0.10	
1F	0	7.838	6.130	0.342	0.000	0.020	-3.059	1	0.02	0.02	0.08	
1G	0	7.838	4.158	-6.320	0.000	-0.418	-1.989	4	0.05	0.02	0.17	
1H	0	7.838	6.130	-6.320	0.000	-0.418	-3.059	4	0.05	0.02	0.21	
1I	0	-0.672	4.203	1.286	0.000	0.067	-2.022	1	0.01	0.00	0.05	
1J	0	-0.672	6.085	1.286	0.000	0.067	-3.026	1	0.02	0.00	0.08	
1K	0	-0.672	4.203	-7.264	0.000	-0.464	-2.022	4	0.05	0.00	0.17	
1L	0	-0.672	6.085	-7.264	0.000	-0.464	-3.026	4	0.05	0.00	0.21	
1M	0	6.716	4.203	1.286	0.000	0.067	-2.022	3	0.01	0.01	0.10	
1N	0	6.716	6.085	1.286	0.000	0.067	-3.026	1	0.02	0.01	0.08	
1O	0	6.716	4.203	-7.264	0.000	-0.464	-2.022	4	0.05	0.01	0.17	
1P	0	6.716	6.085	-7.264	0.000	-0.464	-3.026	4	0.05	0.01	0.22	
2	0	3.875	9.255	-4.467	0.000	-0.312	-4.404	4	0.03	0.01	0.24	
7	0	3.528	6.021	-7.383	0.000	-0.469	-3.225	4	0.05	0.01	0.22	
1A	5	-1.794	4.097	0.342	0.000	0.003	-1.781	4	0.01	0.00	0.08	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1B	5	-1.794	6.069	0.342	0.000	0.003	-2.756	4	0.02	0.00	0.12	
1C	5	-1.794	4.097	-6.320	0.000	-0.102	-1.781	4	0.05	0.00	0.10	
1D	5	-1.794	6.069	-6.320	0.000	-0.102	-2.756	4	0.05	0.00	0.14	
1E	5	7.838	4.097	0.342	0.000	0.003	-1.781	3	0.01	0.02	0.08	
1F	5	7.838	6.069	0.342	0.000	0.003	-2.756	3	0.02	0.02	0.13	
1G	5	7.838	4.097	-6.320	0.000	-0.102	-1.781	4	0.05	0.02	0.10	
1H	5	7.838	6.069	-6.320	0.000	-0.102	-2.756	4	0.05	0.02	0.14	
1I	5	-0.672	4.142	1.286	0.000	0.002	-1.812	4	0.01	0.00	0.08	
1J	5	-0.672	6.024	1.286	0.000	0.002	-2.725	4	0.02	0.00	0.11	
1K	5	-0.672	4.142	-7.264	0.000	-0.100	-1.812	4	0.05	0.00	0.09	
1L	5	-0.672	6.024	-7.264	0.000	-0.100	-2.725	4	0.05	0.00	0.13	
1M	5	6.716	4.142	1.286	0.000	0.002	-1.812	3	0.01	0.01	0.08	
1N	5	6.716	6.024	1.286	0.000	0.002	-2.725	1	0.02	0.01	0.07	
1O	5	6.716	4.142	-7.264	0.000	-0.100	-1.812	4	0.05	0.01	0.10	
1P	5	6.716	6.024	-7.264	0.000	-0.100	-2.725	4	0.05	0.01	0.14	
2	5	3.875	9.176	-4.467	0.000	-0.089	-3.944	4	0.03	0.01	0.18	
7	5	3.528	5.942	-7.383	0.000	-0.100	-2.926	4	0.05	0.01	0.14	
1A	10	-1.794	4.036	0.342	0.000	-0.014	-1.577	4	0.01	0.00	0.07	
1B	10	-1.794	6.008	0.342	0.000	-0.014	-2.455	4	0.02	0.00	0.11	
1C	10	-1.794	4.036	-6.320	0.000	0.215	-1.577	1	0.05	0.00	0.05	
1D	10	-1.794	6.008	-6.320	0.000	0.215	-2.455	1	0.05	0.00	0.08	
1E	10	7.838	4.036	0.342	0.000	-0.014	-1.577	3	0.01	0.02	0.08	
1F	10	7.838	6.008	0.342	0.000	-0.014	-2.455	3	0.02	0.02	0.11	
1G	10	7.838	4.036	-6.320	0.000	0.215	-1.577	3	0.05	0.02	0.11	
1H	10	7.838	6.008	-6.320	0.000	0.215	-2.455	3	0.05	0.02	0.15	
1I	10	-0.672	4.081	1.286	0.000	-0.063	-1.606	4	0.01	0.00	0.08	
1J	10	-0.672	5.963	1.286	0.000	-0.063	-2.426	4	0.02	0.00	0.11	
1K	10	-0.672	4.081	-7.264	0.000	0.263	-1.606	1	0.05	0.00	0.06	
1L	10	-0.672	5.963	-7.264	0.000	0.263	-2.426	1	0.05	0.00	0.08	
1M	10	6.716	4.081	1.286	0.000	-0.063	-1.606	4	0.01	0.01	0.09	
1N	10	6.716	5.963	1.286	0.000	-0.063	-2.426	4	0.02	0.01	0.12	
1O	10	6.716	4.081	-7.264	0.000	0.263	-1.606	3	0.05	0.01	0.12	
1P	10	6.716	5.963	-7.264	0.000	0.263	-2.426	1	0.05	0.01	0.08	
2	10	3.875	9.097	-4.467	0.000	0.135	-3.487	1	0.03	0.01	0.10	
7	10	3.528	5.863	-7.383	0.000	0.270	-2.631	1	0.05	0.01	0.09	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx -- kN	My ----- kN*m	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
1A	-1.794	0.020	-1.989	4	0.8224	0.9991	1.0021	--	--	0.00	--	0.09	Snell.imin= 5
1B	-1.794	0.020	-3.059	4	0.8224	0.9991	1.0022	--	--	0.00	--	0.13	Snell.imin= 5
1C	-1.794	-0.418	-1.989	4	0.8224	0.9995	1.0021	--	--	0.00	--	0.16	Snell.imin= 5
1D	-1.794	-0.418	-3.059	4	0.8224	0.9995	1.0022	--	--	0.00	--	0.20	Snell.imin= 5
1E	7.838	0.020	-1.989	3	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1F	7.838	0.020	-3.059	3	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1G	7.838	-0.418	-1.989	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1H	7.838	-0.418	-3.059	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1I	-0.672	0.067	-2.022	4	0.8224	0.9995	1.0008	--	--	0.00	--	0.10	Snell.imin= 5
1J	-0.672	0.067	-3.026	4	0.8224	0.9995	1.0008	--	--	0.00	--	0.14	Snell.imin= 5
1K	-0.672	-0.464	-2.022	4	0.8224	0.9998	1.0008	--	--	0.00	--	0.17	Snell.imin= 5
1L	-0.672	-0.464	-3.026	4	0.8224	0.9998	1.0008	--	--	0.00	--	0.21	Snell.imin= 5
1M	6.716	0.067	-2.022	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1N	6.716	0.067	-3.026	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1O	6.716	-0.464	-2.022	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1P	6.716	-0.464	-3.026	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
2	3.875	-0.312	-4.404	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
7	3.528	-0.469	-3.225	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5

ASTA NUM. 42 NI 112 NF 139 Lungh. 72.0 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x -- cm	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
1A	0	-1.792	-0.132	0.001	0.000	0.000	0.345	1	0.00	0.01	0.06	
1B	0	-1.792	-0.078	0.001	0.000	0.000	0.163	1	0.00	0.01	0.03	
1C	0	-1.792	-0.132	-0.002	0.000	-0.001	0.345	1	0.00	0.01	0.06	
1D	0	-1.792	-0.078	-0.002	0.000	-0.001	0.163	1	0.00	0.01	0.03	
1E	0	2.247	-0.132	0.001	0.000	0.000	0.345	1	0.00	0.01	0.06	
1F	0	2.247	-0.078	0.001	0.000	0.000	0.163	1	0.00	0.01	0.03	
1G	0	2.247	-0.132	-0.002	0.000	-0.001	0.345	1	0.00	0.01	0.06	
1H	0	2.247	-0.078	-0.002	0.000	-0.001	0.163	1	0.00	0.01	0.03	
1I	0	-2.760	-0.137	0.002	0.000	0.001	0.322	1	0.00	0.01	0.05	
1J	0	-2.760	-0.072	0.002	0.000	0.001	0.186	1	0.00	0.01	0.03	
1K	0	-2.760	-0.137	-0.003	0.000	-0.001	0.322	1	0.00	0.01	0.05	
1L	0	-2.760	-0.072	-0.003	0.000	-0.001	0.186	1	0.00	0.01	0.03	
1M	0	3.215	-0.137	0.002	0.000	0.001	0.322	1	0.00	0.01	0.05	
1N	0	3.215	-0.072	0.002	0.000	0.001	0.186	1	0.00	0.01	0.03	
1O	0	3.215	-0.137	-0.003	0.000	-0.001	0.322	1	0.00	0.01	0.05	
1P	0	3.215	-0.072	-0.003	0.000	-0.001	0.186	1	0.00	0.01	0.03	
2	0	0.320	-0.212	-0.001	0.000	-0.000	0.481	1	0.00	0.00	0.08	
7	0	-0.964	-0.087	0.003	0.000	0.001	0.336	1	0.00	0.00	0.06	
1A	36	-1.792	-0.159	0.001	0.000	-0.000	0.304	1	0.00	0.01	0.05	
1B	36	-1.792	-0.105	0.001	0.000	-0.000	0.118	1	0.00	0.01	0.02	
1C	36	-1.792	-0.159	-0.002	0.000	-0.000	0.304	1	0.00	0.01	0.05	
1D	36	-1.792	-0.105	-0.002	0.000	-0.000	0.118	1	0.00	0.01	0.02	
1E	36	2.247	-0.159	0.001	0.000	-0.000	0.304	1	0.00	0.01	0.05	
1F	36	2.247	-0.105	0.001	0.000	-0.000	0.118	1	0.00	0.01	0.02	
1G	36	2.247	-0.159	-0.002	0.000	-0.000	0.304	1	0.00	0.01	0.05	
1H	36	2.247	-0.105	-0.002	0.000	-0.000	0.118	1	0.00	0.01	0.02	
1I	36	-2.760	-0.165	0.002	0.000	-0.000	0.277	1	0.00	0.01	0.05	

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1J	36	-2.760	-0.100	0.002	0.000	-0.000	0.145	1	0.00	0.01	0.02	
1K	36	-2.760	-0.165	-0.003	0.000	-0.000	0.277	1	0.00	0.01	0.05	
1L	36	-2.760	-0.100	-0.003	0.000	-0.000	0.145	1	0.00	0.01	0.02	
1M	36	3.215	-0.165	0.002	0.000	-0.000	0.277	1	0.00	0.01	0.05	
1N	36	3.215	-0.100	0.002	0.000	-0.000	0.145	1	0.00	0.01	0.02	
1O	36	3.215	-0.165	-0.003	0.000	-0.000	0.277	1	0.00	0.01	0.05	
1P	36	3.215	-0.100	-0.003	0.000	-0.000	0.145	1	0.00	0.01	0.02	
2	36	0.321	-0.248	-0.001	0.000	-0.000	0.398	1	0.00	0.00	0.07	
7	36	-0.964	-0.123	0.003	0.000	0.000	0.298	1	0.00	0.00	0.05	
1A	72	-1.791	-0.187	0.001	0.000	-0.000	0.253	1	0.00	0.01	0.04	
1B	72	-1.791	-0.133	0.001	0.000	-0.000	0.064	1	0.00	0.01	0.01	
1C	72	-1.791	-0.187	-0.002	0.000	0.001	0.253	1	0.00	0.01	0.04	
1D	72	-1.791	-0.133	-0.002	0.000	0.001	0.064	1	0.00	0.01	0.01	
1E	72	2.247	-0.187	0.001	0.000	-0.000	0.253	1	0.00	0.01	0.04	
1F	72	2.247	-0.133	0.001	0.000	-0.000	0.064	1	0.00	0.01	0.01	
1G	72	2.247	-0.187	-0.002	0.000	0.001	0.253	1	0.00	0.01	0.04	
1H	72	2.247	-0.133	-0.002	0.000	0.001	0.064	1	0.00	0.01	0.01	
1I	72	-2.760	-0.193	0.002	0.000	-0.001	0.223	1	0.00	0.01	0.04	
1J	72	-2.760	-0.127	0.002	0.000	-0.001	0.095	1	0.00	0.01	0.02	
1K	72	-2.760	-0.193	-0.003	0.000	0.001	0.223	1	0.00	0.01	0.04	
1L	72	-2.760	-0.127	-0.003	0.000	0.001	0.095	1	0.00	0.01	0.02	
1M	72	3.215	-0.193	0.002	0.000	-0.001	0.223	1	0.00	0.01	0.04	
1N	72	3.215	-0.127	0.002	0.000	-0.001	0.095	1	0.00	0.01	0.02	
1O	72	3.215	-0.193	-0.003	0.000	0.001	0.223	1	0.00	0.01	0.04	
1P	72	3.215	-0.127	-0.003	0.000	0.001	0.095	1	0.00	0.01	0.02	
2	72	0.321	-0.284	-0.001	0.000	0.000	0.302	1	0.00	0.00	0.05	
7	72	-0.964	-0.159	0.003	0.000	-0.001	0.248	1	0.00	0.00	0.04	

#### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-1.792	-0.000	0.345	1	0.1083	0.9416	0.9993	--	--	0.07	--	0.13	Snell. 'zx'= 250
1B	-1.792	-0.000	0.163	1	0.1083	0.9416	0.9983	--	--	0.07	--	0.10	Snell. 'zx'= 250
1C	-1.792	-0.001	0.345	1	0.1083	0.9416	0.9993	--	--	0.07	--	0.13	Snell. 'zx'= 250
1D	-1.792	-0.001	0.163	1	0.1083	0.9416	0.9983	--	--	0.07	--	0.10	Snell. 'zx'= 250
1E	2.247	-0.000	0.345	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1F	2.247	-0.000	0.163	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1G	2.247	-0.001	0.345	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1H	2.247	-0.001	0.163	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1I	-2.760	-0.001	0.322	1	0.1083	0.9100	0.9987	--	--	0.10	--	0.16	Snell. 'zx'= 250
1J	-2.760	-0.001	0.186	1	0.1083	0.9100	0.9979	--	--	0.10	--	0.14	Snell. 'zx'= 250
1K	-2.760	-0.001	0.322	1	0.1083	0.9100	0.9987	--	--	0.10	--	0.16	Snell. 'zx'= 250
1L	-2.760	-0.001	0.186	1	0.1083	0.9100	0.9979	--	--	0.10	--	0.14	Snell. 'zx'= 250
1M	3.215	-0.001	0.322	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1N	3.215	-0.001	0.186	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1O	3.215	-0.001	0.322	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1P	3.215	-0.001	0.186	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
2	0.321	-0.000	0.481	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
7	-0.964	0.001	0.336	1	0.1083	0.9686	0.9996	--	--	0.04	--	0.09	Snell. 'zx'= 250

**ASTA NUM. 43** NI 110 NF 139 Lungh. 72.0 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-1.757	-0.311	0.000	0.000	-0.000	-0.033	1	0.00	0.01	0.01	
1B	0	-1.757	-0.204	0.000	0.000	-0.000	-0.182	1	0.00	0.01	0.03	
1C	0	-1.757	-0.311	-0.002	0.000	-0.001	-0.033	1	0.00	0.01	0.01	
1D	0	-1.757	-0.204	-0.002	0.000	-0.001	-0.182	1	0.00	0.01	0.03	
1E	0	2.067	-0.311	0.000	0.000	-0.000	-0.033	1	0.00	0.01	0.01	
1F	0	2.067	-0.204	0.000	0.000	-0.000	-0.182	1	0.00	0.01	0.03	
1G	0	2.067	-0.311	-0.002	0.000	-0.001	-0.033	1	0.00	0.01	0.01	
1H	0	2.067	-0.204	-0.002	0.000	-0.001	-0.182	1	0.00	0.01	0.03	
1I	0	-2.390	-0.306	0.000	0.000	-0.000	-0.046	1	0.00	0.01	0.01	
1J	0	-2.390	-0.209	0.000	0.000	-0.000	-0.169	1	0.00	0.01	0.03	
1K	0	-2.390	-0.306	-0.002	0.000	-0.001	-0.046	1	0.00	0.01	0.01	
1L	0	-2.390	-0.209	-0.002	0.000	-0.001	-0.169	1	0.00	0.01	0.03	
1M	0	2.700	-0.306	0.000	0.000	-0.000	-0.046	1	0.00	0.01	0.01	
1N	0	2.700	-0.209	0.000	0.000	-0.000	-0.169	1	0.00	0.01	0.03	
1O	0	2.700	-0.306	-0.002	0.000	-0.001	-0.046	1	0.00	0.01	0.01	
1P	0	2.700	-0.209	-0.002	0.000	-0.001	-0.169	1	0.00	0.01	0.03	
2	0	0.272	-0.525	-0.001	0.000	-0.001	-0.186	1	0.00	0.00	0.03	
7	0	1.914	-0.347	0.000	0.000	-0.000	-0.134	1	0.00	0.01	0.02	
1A	36	-1.757	-0.339	0.000	0.000	-0.000	-0.119	1	0.00	0.01	0.02	
1B	36	-1.757	-0.232	0.000	0.000	-0.000	-0.292	1	0.00	0.01	0.05	
1C	36	-1.757	-0.339	-0.002	0.000	-0.000	-0.119	1	0.00	0.01	0.02	
1D	36	-1.757	-0.232	-0.002	0.000	-0.000	-0.292	1	0.00	0.01	0.05	
1E	36	2.067	-0.339	0.000	0.000	-0.000	-0.119	1	0.00	0.01	0.02	
1F	36	2.067	-0.232	0.000	0.000	-0.000	-0.292	1	0.00	0.01	0.05	
1G	36	2.067	-0.339	-0.002	0.000	-0.000	-0.119	1	0.00	0.01	0.02	
1H	36	2.067	-0.232	-0.002	0.000	-0.000	-0.292	1	0.00	0.01	0.05	
1I	36	-2.389	-0.333	0.000	0.000	-0.000	-0.137	1	0.00	0.01	0.02	
1J	36	-2.389	-0.237	0.000	0.000	-0.000	-0.274	1	0.00	0.01	0.05	
1K	36	-2.389	-0.333	-0.002	0.000	0.000	-0.137	1	0.00	0.01	0.02	
1L	36	-2.389	-0.237	-0.002	0.000	0.000	-0.274	1	0.00	0.01	0.05	
1M	36	2.700	-0.333	0.000	0.000	-0.000	-0.137	1	0.00	0.01	0.02	
1N	36	2.700	-0.237	0.000	0.000	-0.000	-0.274	1	0.00	0.01	0.05	
1O	36	2.700	-0.333	-0.002	0.000	0.000	-0.137	1	0.00	0.01	0.02	
1P	36	2.700	-0.237	-0.002	0.000	0.000	-0.274	1	0.00	0.01	0.05	
2	36	0.272	-0.561	-0.001	0.000	-0.000	-0.382	1	0.00	0.00	0.06	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

7	36	1.915	-0.383	0.000	0.000	-0.000	-0.266	1	0.00	0.01	0.04
1A	72	-1.757	-0.367	0.000	0.000	-0.000	-0.215	1	0.00	0.01	0.04
1B	72	-1.757	-0.259	0.000	0.000	-0.000	-0.412	1	0.00	0.01	0.07
1C	72	-1.757	-0.367	-0.002	0.000	0.001	-0.215	1	0.00	0.01	0.04
1D	72	-1.757	-0.259	-0.002	0.000	0.001	-0.412	1	0.00	0.01	0.07
1E	72	2.067	-0.367	0.000	0.000	-0.000	-0.215	1	0.00	0.01	0.04
1F	72	2.067	-0.259	0.000	0.000	-0.000	-0.412	1	0.00	0.01	0.07
1G	72	2.067	-0.367	-0.002	0.000	0.001	-0.215	1	0.00	0.01	0.04
1H	72	2.067	-0.259	-0.002	0.000	0.001	-0.412	1	0.00	0.01	0.07
1I	72	-2.389	-0.361	0.000	0.000	-0.000	-0.238	1	0.00	0.01	0.04
1J	72	-2.389	-0.265	0.000	0.000	-0.000	-0.388	1	0.00	0.01	0.06
1K	72	-2.389	-0.361	-0.002	0.000	0.001	-0.238	1	0.00	0.01	0.04
1L	72	-2.389	-0.265	-0.002	0.000	0.001	-0.388	1	0.00	0.01	0.06
1M	72	2.700	-0.361	0.000	0.000	-0.000	-0.238	1	0.00	0.01	0.04
1N	72	2.700	-0.265	0.000	0.000	-0.000	-0.388	1	0.00	0.01	0.06
1O	72	2.700	-0.361	-0.002	0.000	0.001	-0.238	1	0.00	0.01	0.04
1P	72	2.700	-0.265	-0.002	0.000	0.001	-0.388	1	0.00	0.01	0.06
2	72	0.272	-0.597	-0.001	0.000	0.000	-0.590	1	0.00	0.00	0.10
7	72	1.915	-0.419	0.000	0.000	-0.000	-0.410	1	0.00	0.01	0.07

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\chi_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-1.757	-0.000	-0.215	1	0.1083	1.0867	0.9977	--	--	0.07	--	0.10	Snell. 'zx'= 250
1B	-1.757	-0.000	-0.412	1	0.1083	1.0867	0.9985	--	--	0.07	--	0.13	Snell. 'zx'= 250
1C	-1.757	-0.001	-0.215	1	0.1083	0.9427	0.9977	--	--	0.07	--	0.10	Snell. 'zx'= 250
1D	-1.757	-0.001	-0.412	1	0.1083	0.9427	0.9985	--	--	0.07	--	0.14	Snell. 'zx'= 250
1E	2.067	-0.000	-0.215	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1F	2.067	-0.000	-0.412	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1G	2.067	-0.001	-0.215	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1H	2.067	-0.001	-0.412	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1I	-2.390	-0.000	-0.238	1	0.1083	1.1731	0.9970	--	--	0.09	--	0.13	Snell. 'zx'= 250
1J	-2.390	-0.000	-0.388	1	0.1083	1.1731	0.9979	--	--	0.09	--	0.16	Snell. 'zx'= 250
1K	-2.390	0.001	-0.238	1	0.1083	0.9221	0.9970	--	--	0.09	--	0.13	Snell. 'zx'= 250
1L	-2.390	0.001	-0.388	1	0.1083	0.9221	0.9979	--	--	0.09	--	0.16	Snell. 'zx'= 250
1M	2.700	-0.000	-0.238	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1N	2.700	-0.000	-0.388	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1O	2.700	0.001	-0.238	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1P	2.700	0.001	-0.388	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
2	0.272	-0.001	-0.590	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
7	1.915	-0.000	-0.410	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250

ASTA NUM. 44 NI 116 NF 138 Lungh. 72.0 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-3.500	-0.310	-0.000	0.000	-0.000	-0.030	1	0.00	0.01	0.00	
1B	0	-3.500	-0.220	-0.000	0.000	-0.000	-0.123	1	0.00	0.01	0.02	
1C	0	-3.500	-0.310	-0.001	0.000	-0.001	0.030	1	0.00	0.01	0.00	
1D	0	-3.500	-0.220	-0.001	0.000	-0.001	-0.123	1	0.00	0.01	0.02	
1E	0	1.510	-0.310	-0.000	0.000	-0.000	0.030	1	0.00	0.01	0.00	
1F	0	1.510	-0.220	-0.000	0.000	-0.000	-0.123	1	0.00	0.01	0.02	
1G	0	1.510	-0.310	-0.001	0.000	-0.001	0.030	1	0.00	0.01	0.00	
1H	0	1.510	-0.220	-0.001	0.000	-0.001	-0.123	1	0.00	0.01	0.02	
1I	0	-3.757	-0.318	-0.000	0.000	-0.000	0.027	1	0.00	0.02	0.00	
1J	0	-3.757	-0.212	-0.000	0.000	-0.000	-0.119	1	0.00	0.02	0.02	
1K	0	-3.757	-0.318	-0.001	0.000	-0.001	0.027	1	0.00	0.02	0.00	
1L	0	-3.757	-0.212	-0.001	0.000	-0.001	-0.119	1	0.00	0.02	0.02	
1M	0	1.767	-0.318	-0.000	0.000	-0.000	0.027	1	0.00	0.01	0.00	
1N	0	1.767	-0.212	-0.000	0.000	-0.000	-0.119	1	0.00	0.01	0.02	
1O	0	1.767	-0.318	-0.001	0.000	-0.001	0.027	1	0.00	0.01	0.00	
1P	0	1.767	-0.212	-0.001	0.000	-0.001	-0.119	1	0.00	0.01	0.02	
2	0	-1.929	-0.547	-0.001	0.000	-0.001	-0.070	1	0.00	0.01	0.01	
7	0	1.754	-0.512	-0.001	0.000	-0.001	-0.001	1	0.00	0.01	0.00	
1A	36	-3.500	-0.338	-0.000	0.000	-0.000	-0.063	1	0.00	0.01	0.01	
1B	36	-3.500	-0.248	-0.000	0.000	-0.000	-0.231	1	0.00	0.01	0.04	
1C	36	-3.500	-0.338	-0.001	0.000	-0.000	-0.063	1	0.00	0.01	0.01	
1D	36	-3.500	-0.248	-0.001	0.000	-0.000	-0.231	1	0.00	0.01	0.04	
1E	36	1.510	-0.338	-0.000	0.000	-0.000	-0.063	1	0.00	0.01	0.01	
1F	36	1.510	-0.248	-0.000	0.000	-0.000	-0.231	1	0.00	0.01	0.04	
1G	36	1.510	-0.338	-0.001	0.000	-0.000	-0.063	1	0.00	0.01	0.01	
1H	36	1.510	-0.248	-0.001	0.000	-0.000	-0.231	1	0.00	0.01	0.04	
1I	36	-3.756	-0.346	-0.000	0.000	-0.000	-0.062	1	0.00	0.02	0.01	
1J	36	-3.756	-0.240	-0.000	0.000	-0.000	-0.232	1	0.00	0.02	0.04	
1K	36	-3.756	-0.346	-0.001	0.000	-0.000	-0.062	1	0.00	0.02	0.01	
1L	36	-3.756	-0.240	-0.001	0.000	-0.000	-0.232	1	0.00	0.02	0.04	
1M	36	1.767	-0.346	-0.000	0.000	-0.000	-0.062	1	0.00	0.01	0.01	
1N	36	1.767	-0.240	-0.000	0.000	-0.000	-0.232	1	0.00	0.01	0.04	
1O	36	1.767	-0.346	-0.001	0.000	-0.000	-0.062	1	0.00	0.01	0.01	
1P	36	1.767	-0.240	-0.001	0.000	-0.000	-0.232	1	0.00	0.01	0.04	
2	36	-1.929	-0.583	-0.001	0.000	-0.000	-0.274	1	0.00	0.01	0.05	
7	36	1.754	-0.548	-0.001	0.000	-0.000	-0.192	1	0.00	0.01	0.03	
1A	72	-3.499	-0.366	-0.000	0.000	0.000	-0.167	1	0.00	0.01	0.03	
1B	72	-3.499	-0.276	-0.000	0.000	0.000	-0.348	1	0.00	0.01	0.06	
1C	72	-3.499	-0.366	-0.001	0.000	0.000	-0.167	1	0.00	0.01	0.03	
1D	72	-3.499	-0.276	-0.001	0.000	0.000	-0.348	1	0.00	0.01	0.06	
1E	72	1.510	-0.366	-0.000	0.000	0.000	-0.167	1	0.00	0.01	0.03	
1F	72	1.510	-0.276	-0.000	0.000	0.000	-0.348	1	0.00	0.01	0.06	

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1G	72	1.510	-0.366	-0.001	0.000	0.000	-0.167	1	0.00	0.01	0.03	
1H	72	1.510	-0.276	-0.001	0.000	0.000	-0.348	1	0.00	0.01	0.06	
1I	72	-3.756	-0.373	-0.000	0.000	-0.000	-0.161	1	0.00	0.02	0.03	
1J	72	-3.756	-0.268	-0.000	0.000	-0.000	-0.354	1	0.00	0.02	0.06	
1K	72	-3.756	-0.373	-0.001	0.000	0.000	-0.161	1	0.00	0.02	0.03	
1L	72	-3.756	-0.268	-0.001	0.000	0.000	-0.354	1	0.00	0.02	0.06	
1M	72	1.767	-0.373	-0.000	0.000	-0.000	-0.161	1	0.00	0.01	0.03	
1N	72	1.767	-0.268	-0.000	0.000	-0.000	-0.354	1	0.00	0.01	0.06	
1O	72	1.767	-0.373	-0.001	0.000	0.000	-0.161	1	0.00	0.01	0.03	
1P	72	1.767	-0.268	-0.001	0.000	0.000	-0.354	1	0.00	0.01	0.06	
2	72	-1.929	-0.619	-0.001	0.000	0.000	-0.490	1	0.00	0.01	0.08	
7	72	1.754	-0.584	-0.001	0.000	0.000	-0.396	1	0.00	0.01	0.07	

#### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-3.500	-0.000	-0.167	1	0.1083	1.0212	0.9936	--	--	0.13	--	0.16	Snell. 'zx'= 250
1B	-3.500	-0.000	-0.348	1	0.1083	1.0212	0.9965	--	--	0.13	--	0.19	Snell. 'zx'= 250
1C	-3.500	-0.001	-0.167	1	0.1083	0.8859	0.9936	--	--	0.13	--	0.16	Snell. 'zx'= 250
1D	-3.500	-0.001	-0.348	1	0.1083	0.8859	0.9965	--	--	0.13	--	0.19	Snell. 'zx'= 250
1E	1.510	-0.000	-0.167	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1F	1.510	-0.000	-0.348	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1G	1.510	-0.001	-0.167	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1H	1.510	-0.001	-0.348	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1I	-3.757	-0.000	-0.161	1	0.1083	1.1909	0.9932	--	--	0.14	--	0.17	Snell. 'zx'= 250
1J	-3.757	-0.000	-0.354	1	0.1083	1.1909	0.9961	--	--	0.14	--	0.20	Snell. 'zx'= 250
1K	-3.757	-0.001	-0.161	1	0.1083	0.8776	0.9932	--	--	0.14	--	0.17	Snell. 'zx'= 250
1L	-3.757	-0.001	-0.354	1	0.1083	0.8776	0.9961	--	--	0.14	--	0.20	Snell. 'zx'= 250
1M	1.767	-0.000	-0.161	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1N	1.767	-0.000	-0.354	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1O	1.767	-0.001	-0.161	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1P	1.767	-0.001	-0.354	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
2	-1.929	-0.001	-0.490	1	0.1083	0.9371	0.9974	--	--	0.07	--	0.15	Snell. 'zx'= 250
7	1.754	-0.001	-0.396	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250

ASTA NUM. 45 NI 117 NF 138 Lungh. 72.0 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.

qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-1.983	-0.129	0.001	0.000	0.000	0.291	1	0.00	0.01	0.05	
1B	0	-1.983	-0.068	0.001	0.000	0.000	0.126	1	0.00	0.01	0.02	
1C	0	-1.983	-0.129	-0.001	0.000	-0.000	0.291	1	0.00	0.01	0.05	
1D	0	-1.983	-0.068	-0.001	0.000	-0.000	0.126	1	0.00	0.01	0.02	
1E	0	3.209	-0.129	0.001	0.000	0.000	0.291	1	0.00	0.01	0.05	
1F	0	3.209	-0.068	0.001	0.000	0.000	0.126	1	0.00	0.01	0.02	
1G	0	3.209	-0.129	-0.001	0.000	-0.000	0.291	1	0.00	0.01	0.05	
1H	0	3.209	-0.068	-0.001	0.000	-0.000	0.126	1	0.00	0.01	0.02	
1I	0	-1.998	-0.137	0.001	0.000	0.000	0.291	1	0.00	0.01	0.05	
1J	0	-1.998	-0.060	0.001	0.000	0.000	0.126	1	0.00	0.01	0.02	
1K	0	-1.998	-0.137	-0.001	0.000	-0.000	0.291	1	0.00	0.01	0.05	
1L	0	-1.998	-0.060	-0.001	0.000	-0.000	0.126	1	0.00	0.01	0.02	
1M	0	3.223	-0.137	0.001	0.000	0.000	0.291	1	0.00	0.01	0.05	
1N	0	3.223	-0.060	0.001	0.000	0.000	0.126	1	0.00	0.01	0.02	
1O	0	3.223	-0.137	-0.001	0.000	-0.000	0.291	1	0.00	0.01	0.05	
1P	0	3.223	-0.060	-0.001	0.000	-0.000	0.126	1	0.00	0.01	0.02	
2	0	1.579	-0.212	-0.000	0.000	-0.000	0.400	1	0.00	0.01	0.07	
7	0	-2.153	-0.177	-0.001	0.000	-0.000	0.311	1	0.00	0.01	0.05	
1A	36	-1.983	-0.157	0.001	0.000	-0.000	0.251	1	0.00	0.01	0.04	
1B	36	-1.983	-0.096	0.001	0.000	-0.000	0.085	1	0.00	0.01	0.01	
1C	36	-1.983	-0.157	-0.001	0.000	-0.000	0.251	1	0.00	0.01	0.04	
1D	36	-1.983	-0.096	-0.001	0.000	-0.000	0.085	1	0.00	0.01	0.01	
1E	36	3.209	-0.157	0.001	0.000	-0.000	0.251	1	0.00	0.01	0.04	
1F	36	3.209	-0.096	0.001	0.000	-0.000	0.085	1	0.00	0.01	0.01	
1G	36	3.209	-0.157	-0.001	0.000	-0.000	0.251	1	0.00	0.01	0.04	
1H	36	3.209	-0.096	-0.001	0.000	-0.000	0.085	1	0.00	0.01	0.01	
1I	36	-1.998	-0.165	0.001	0.000	0.000	0.244	1	0.00	0.01	0.04	
1J	36	-1.998	-0.088	0.001	0.000	0.000	0.092	1	0.00	0.01	0.02	
1K	36	-1.998	-0.165	-0.001	0.000	-0.000	0.244	1	0.00	0.01	0.04	
1L	36	-1.998	-0.088	-0.001	0.000	-0.000	0.092	1	0.00	0.01	0.02	
1M	36	3.223	-0.165	0.001	0.000	0.000	0.244	1	0.00	0.01	0.04	
1N	36	3.223	-0.088	0.001	0.000	0.000	0.092	1	0.00	0.01	0.02	
1O	36	3.223	-0.165	-0.001	0.000	-0.000	0.244	1	0.00	0.01	0.04	
1P	36	3.223	-0.088	-0.001	0.000	-0.000	0.092	1	0.00	0.01	0.02	
2	36	1.579	-0.248	-0.000	0.000	-0.000	0.317	1	0.00	0.01	0.05	
7	36	-2.153	-0.213	-0.001	0.000	-0.000	0.240	1	0.00	0.01	0.04	
1A	72	-1.983	-0.185	0.001	0.000	-0.000	0.201	1	0.00	0.01	0.03	
1B	72	-1.983	-0.124	0.001	0.000	-0.000	0.034	1	0.00	0.01	0.01	
1C	72	-1.983	-0.185	-0.001	0.000	0.000	0.201	1	0.00	0.01	0.03	
1D	72	-1.983	-0.124	-0.001	0.000	0.000	0.034	1	0.00	0.01	0.01	
1E	72	3.209	-0.185	0.001	0.000	-0.000	0.201	1	0.00	0.01	0.03	
1F	72	3.209	-0.124	0.001	0.000	-0.000	0.034	1	0.00	0.01	0.01	
1G	72	3.209	-0.185	-0.001	0.000	0.000	0.201	1	0.00	0.01	0.03	
1H	72	3.209	-0.124	-0.001	0.000	0.000	0.034	1	0.00	0.01	0.01	
1I	72	-1.998	-0.193	0.001	0.000	-0.000	0.186	1	0.00	0.01	0.03	
1J	72	-1.998	-0.116	0.001	0.000	-0.000	0.048	1	0.00	0.01	0.01	
1K	72	-1.998	-0.193	-0.001	0.000	0.000	0.186	1	0.00	0.01	0.03	
1L	72	-1.998	-0.116	-0.001	0.000	0.000	0.048	1	0.00	0.01	0.01	
1M	72	3.224	-0.193	0.001	0.000	-0.000	0.186	1	0.00	0.01	0.03	
1N	72	3.224	-0.116	0.001	0.000	-0.000	0.048	1	0.00	0.01	0.01	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

10	72	3.224	-0.193	-0.001	0.000	0.000	0.186	1	0.00	0.01	0.03
1P	72	3.224	-0.116	-0.001	0.000	0.000	0.048	1	0.00	0.01	0.01
2	72	1.579	-0.284	-0.000	0.000	0.000	0.221	1	0.00	0.01	0.04
7	72	-2.153	-0.249	-0.001	0.000	0.000	0.157	1	0.00	0.01	0.03

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN												
	kN*m												
1A	-1.983	-0.000	0.291	1	0.1083	0.9354	0.9990	--	--	0.08	--	0.12	Snell. 'zx'= 250
1B	-1.983	-0.000	0.126	1	0.1083	0.9354	0.9978	--	--	0.08	--	0.10	Snell. 'zx'= 250
1C	-1.983	-0.000	0.291	1	0.1083	0.9354	0.9990	--	--	0.08	--	0.12	Snell. 'zx'= 250
1D	-1.983	-0.000	0.126	1	0.1083	0.9354	0.9978	--	--	0.08	--	0.10	Snell. 'zx'= 250
1E	3.209	-0.000	0.291	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1F	3.209	-0.000	0.126	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1G	3.209	-0.000	0.291	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1H	3.209	-0.000	0.126	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1I	-1.998	0.000	0.291	1	0.1083	0.9349	0.9989	--	--	0.08	--	0.12	Snell. 'zx'= 250
1J	-1.998	0.000	0.126	1	0.1083	0.9349	0.9981	--	--	0.08	--	0.10	Snell. 'zx'= 250
1K	-1.998	-0.000	0.291	1	0.1083	0.9349	0.9989	--	--	0.08	--	0.12	Snell. 'zx'= 250
1L	-1.998	-0.000	0.126	1	0.1083	0.9349	0.9981	--	--	0.08	--	0.10	Snell. 'zx'= 250
1M	3.224	0.000	0.291	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1N	3.224	0.000	0.126	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1O	3.224	-0.000	0.291	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1P	3.224	-0.000	0.126	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
2	1.579	-0.000	0.400	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
7	-2.153	-0.000	0.311	1	0.1083	0.9298	0.9983	--	--	0.08	--	0.13	Snell. 'zx'= 250

ASTA NUM. 46 NI 123 NF 137 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.08 1.13 4.00 5.20 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-6.232	1.310	0.003	0.000	0.002	-0.495	1	0.01	0.03	0.08	
1B	0	-6.232	1.458	0.003	0.000	0.002	-0.757	1	0.01	0.03	0.12	
1C	0	-6.232	1.310	-0.000	0.000	-0.000	-0.495	1	0.01	0.03	0.08	
1D	0	-6.232	1.458	-0.000	0.000	-0.000	-0.757	1	0.01	0.03	0.12	
1E	0	1.898	1.310	0.003	0.000	0.002	-0.495	1	0.01	0.01	0.08	
1F	0	1.898	1.458	0.003	0.000	0.002	-0.757	1	0.01	0.01	0.12	
1G	0	1.898	1.310	-0.000	0.000	-0.000	-0.495	1	0.01	0.01	0.08	
1H	0	1.898	1.458	-0.000	0.000	-0.000	-0.757	1	0.01	0.01	0.12	
1I	0	-5.047	1.317	0.005	0.000	0.002	-0.485	1	0.01	0.02	0.08	
1J	0	-5.047	1.451	0.005	0.000	0.002	-0.767	1	0.01	0.02	0.13	
1K	0	-5.047	1.317	-0.001	0.000	-0.001	-0.485	1	0.01	0.02	0.08	
1L	0	-5.047	1.451	-0.001	0.000	-0.001	-0.767	1	0.01	0.02	0.13	
1M	0	0.713	1.317	0.005	0.000	0.002	-0.485	1	0.01	0.00	0.08	
1N	0	0.713	1.451	0.005	0.000	0.002	-0.767	1	0.01	0.00	0.13	
1O	0	0.713	1.317	-0.001	0.000	-0.001	-0.485	1	0.01	0.00	0.08	
1P	0	0.713	1.451	-0.001	0.000	-0.001	-0.767	1	0.01	0.00	0.13	
2	0	-2.942	2.619	0.003	0.000	0.001	-1.178	1	0.02	0.01	0.19	
7	0	-0.139	2.495	0.005	0.000	0.003	-0.857	1	0.02	0.00	0.14	
1A	35	-6.232	0.461	0.003	0.000	0.000	-0.167	1	0.00	0.03	0.03	
1B	35	-6.232	0.608	0.003	0.000	0.000	-0.407	1	0.00	0.03	0.07	
1C	35	-6.232	0.461	-0.000	0.000	0.000	-0.167	1	0.00	0.03	0.03	
1D	35	-6.232	0.608	-0.000	0.000	0.000	-0.407	1	0.00	0.03	0.07	
1E	35	1.898	0.461	0.003	0.000	0.000	-0.167	1	0.00	0.01	0.03	
1F	35	1.898	0.608	0.003	0.000	0.000	-0.407	1	0.00	0.01	0.07	
1G	35	1.898	0.461	-0.000	0.000	0.000	-0.167	1	0.00	0.01	0.03	
1H	35	1.898	0.608	-0.000	0.000	0.000	-0.407	1	0.00	0.01	0.07	
1I	35	-5.047	0.468	0.005	0.000	0.001	-0.162	1	0.00	0.02	0.03	
1J	35	-5.047	0.601	0.005	0.000	0.001	-0.413	1	0.00	0.02	0.07	
1K	35	-5.047	0.468	-0.001	0.000	-0.000	-0.162	1	0.00	0.02	0.03	
1L	35	-5.047	0.601	-0.001	0.000	-0.000	-0.413	1	0.00	0.02	0.07	
1M	35	0.713	0.468	0.005	0.000	0.001	-0.162	1	0.00	0.00	0.03	
1N	35	0.713	0.601	0.005	0.000	0.001	-0.413	1	0.00	0.00	0.07	
1O	35	0.713	0.468	-0.001	0.000	-0.000	-0.162	1	0.00	0.00	0.03	
1P	35	0.713	0.601	-0.001	0.000	-0.000	-0.413	1	0.00	0.00	0.07	
2	35	-2.942	1.006	0.003	0.000	0.000	-0.538	1	0.01	0.01	0.09	
7	35	-0.139	0.882	0.005	0.000	0.001	-0.260	1	0.01	0.00	0.04	
1A	71	-6.232	-0.388	0.003	0.000	-0.001	-0.138	1	0.00	0.03	0.02	
1B	71	-6.232	-0.241	0.003	0.000	-0.001	-0.358	1	0.00	0.03	0.06	
1C	71	-6.232	-0.388	-0.000	0.000	0.000	-0.138	1	0.00	0.03	0.02	
1D	71	-6.232	-0.241	-0.000	0.000	0.000	-0.358	1	0.00	0.03	0.06	
1E	71	1.898	-0.388	0.003	0.000	-0.001	-0.138	1	0.00	0.01	0.02	
1F	71	1.898	-0.241	0.003	0.000	-0.001	-0.358	1	0.00	0.01	0.06	
1G	71	1.898	-0.388	-0.000	0.000	0.000	-0.138	1	0.00	0.01	0.02	
1H	71	1.898	-0.241	-0.000	0.000	0.000	-0.358	1	0.00	0.01	0.06	
1I	71	-5.047	-0.381	0.005	0.000	-0.001	-0.138	1	0.00	0.02	0.02	
1J	71	-5.047	-0.248	0.005	0.000	-0.001	-0.358	1	0.00	0.02	0.06	
1K	71	-5.047	-0.381	-0.001	0.000	0.000	-0.138	1	0.00	0.02	0.02	
1L	71	-5.047	-0.248	-0.001	0.000	0.000	-0.358	1	0.00	0.02	0.06	
1M	71	0.713	-0.381	0.005	0.000	-0.001	-0.138	1	0.00	0.00	0.02	
1N	71	0.713	-0.248	0.005	0.000	-0.001	-0.358	1	0.00	0.00	0.06	
1O	71	0.713	-0.381	-0.001	0.000	0.000	-0.138	1	0.00	0.00	0.02	
1P	71	0.713	-0.248	-0.001	0.000	0.000	-0.358	1	0.00	0.00	0.06	
2	71	-2.942	-0.608	0.003	0.000	-0.001	-0.468	1	0.00	0.01	0.08	
7	71	-0.138	-0.731	0.005	0.000	-0.001	-0.233	1	0.01	0.00	0.04	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	kN	kN*m											
1A	-6.232	0.002	-0.495	1	0.1121	0.8038	0.9952	--	--	0.23	--	0.31	Snell. 'zx'= 245
1B	-6.232	0.002	-0.757	1	0.1121	0.8038	0.9956	--	--	0.23	--	0.36	Snell. 'zx'= 245
1C	-6.232	0.000	-0.495	1	0.1121	1.5000	0.9952	--	--	0.23	--	0.31	Snell. 'zx'= 245
1D	-6.232	0.000	-0.757	1	0.1121	1.5000	0.9956	--	--	0.23	--	0.35	Snell. 'zx'= 245
1E	1.898	0.002	-0.495	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	1.898	0.002	-0.757	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	1.898	0.000	-0.495	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	1.898	0.000	-0.757	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-5.047	0.002	-0.485	1	0.1121	0.8411	0.9962	--	--	0.19	--	0.27	Snell. 'zx'= 245
1J	-5.047	0.002	-0.767	1	0.1121	0.8411	0.9964	--	--	0.19	--	0.31	Snell. 'zx'= 245
1K	-5.047	-0.001	-0.485	1	0.1121	0.8411	0.9962	--	--	0.19	--	0.27	Snell. 'zx'= 245
1L	-5.047	-0.001	-0.767	1	0.1121	0.8411	0.9964	--	--	0.19	--	0.31	Snell. 'zx'= 245
1M	0.713	0.002	-0.485	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	0.713	0.002	-0.767	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	0.713	-0.001	-0.485	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	0.713	-0.001	-0.767	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	-2.942	0.001	-1.178	1	0.1121	0.9074	0.9975	--	--	0.11	--	0.30	Snell. 'zx'= 245
7	-0.139	0.003	-0.857	1	0.1121	0.9956	0.9999	--	--	0.01	--	0.15	Snell. 'zx'= 245

**ASTA NUM. 47** NI 125 NF 137 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.

qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	cm	kN			kN*m							
1A	0	-1.140	0.382	0.000	0.000	-0.000	0.220	1	0.00	0.00	0.04	
1B	0	-1.140	0.512	0.000	0.000	-0.000	0.028	1	0.00	0.00	0.00	
1C	0	-1.140	0.382	-0.001	0.000	-0.000	0.220	1	0.00	0.00	0.04	
1D	0	-1.140	0.512	-0.001	0.000	-0.000	0.028	1	0.00	0.00	0.00	
1E	0	5.706	0.382	0.000	0.000	-0.000	0.220	1	0.00	0.02	0.04	
1F	0	5.706	0.512	0.000	0.000	-0.000	0.028	1	0.00	0.02	0.00	
1G	0	5.706	0.382	-0.001	0.000	-0.000	0.220	1	0.00	0.02	0.04	
1H	0	5.706	0.512	-0.001	0.000	-0.000	0.028	1	0.00	0.02	0.00	
1I	0	0.104	0.379	0.000	0.000	0.000	0.218	1	0.00	0.00	0.04	
1J	0	0.104	0.515	0.000	0.000	0.000	0.030	1	0.00	0.00	0.00	
1K	0	0.104	0.379	-0.002	0.000	-0.001	0.218	1	0.00	0.00	0.04	
1L	0	0.104	0.515	-0.002	0.000	-0.001	0.030	1	0.00	0.00	0.00	
1M	0	4.462	0.379	0.000	0.000	0.000	0.218	1	0.00	0.02	0.04	
1N	0	4.462	0.515	0.000	0.000	0.000	0.030	1	0.00	0.02	0.00	
1O	0	4.462	0.379	-0.002	0.000	-0.001	0.218	1	0.00	0.02	0.04	
1P	0	4.462	0.515	-0.002	0.000	-0.001	0.030	1	0.00	0.02	0.00	
2	0	3.242	0.834	-0.001	0.000	-0.000	0.233	1	0.01	0.01	0.04	
7	0	1.926	0.845	-0.002	0.000	-0.001	0.019	1	0.01	0.01	0.00	
1A	35	-1.140	0.354	0.000	0.000	-0.000	0.389	1	0.00	0.00	0.06	
1B	35	-1.140	0.484	0.000	0.000	-0.000	0.164	1	0.00	0.00	0.03	
1C	35	-1.140	0.354	-0.001	0.000	-0.000	0.389	1	0.00	0.00	0.06	
1D	35	-1.140	0.484	-0.001	0.000	-0.000	0.164	1	0.00	0.00	0.03	
1E	35	5.706	0.354	0.000	0.000	-0.000	0.389	1	0.00	0.02	0.06	
1F	35	5.706	0.484	0.000	0.000	-0.000	0.164	1	0.00	0.02	0.03	
1G	35	5.706	0.354	-0.001	0.000	-0.000	0.389	1	0.00	0.02	0.06	
1H	35	5.706	0.484	-0.001	0.000	-0.000	0.164	1	0.00	0.02	0.03	
1I	35	0.104	0.351	0.000	0.000	0.000	0.390	1	0.00	0.00	0.06	
1J	35	0.104	0.487	0.000	0.000	0.000	0.163	1	0.00	0.00	0.03	
1K	35	0.104	0.351	-0.002	0.000	-0.000	0.390	1	0.00	0.00	0.06	
1L	35	0.104	0.487	-0.002	0.000	-0.000	0.163	1	0.00	0.00	0.03	
1M	35	4.462	0.351	0.000	0.000	0.000	0.390	1	0.00	0.02	0.06	
1N	35	4.462	0.487	0.000	0.000	0.000	0.163	1	0.00	0.02	0.03	
1O	35	4.462	0.351	-0.002	0.000	-0.000	0.390	1	0.00	0.02	0.06	
1P	35	4.462	0.487	-0.002	0.000	-0.000	0.163	1	0.00	0.02	0.03	
2	35	3.243	0.797	-0.001	0.000	-0.000	0.521	1	0.01	0.01	0.09	
7	35	1.926	0.809	-0.002	0.000	-0.000	0.311	1	0.01	0.01	0.05	
1A	71	-1.140	0.326	0.000	0.000	-0.000	0.549	1	0.00	0.00	0.09	
1B	71	-1.140	0.457	0.000	0.000	-0.000	0.291	1	0.00	0.00	0.05	
1C	71	-1.140	0.326	-0.001	0.000	0.000	0.549	1	0.00	0.00	0.09	
1D	71	-1.140	0.457	-0.001	0.000	0.000	0.291	1	0.00	0.00	0.05	
1E	71	5.706	0.326	0.000	0.000	-0.000	0.549	1	0.00	0.02	0.09	
1F	71	5.706	0.457	0.000	0.000	-0.000	0.291	1	0.00	0.02	0.05	
1G	71	5.706	0.326	-0.001	0.000	0.000	0.549	1	0.00	0.02	0.09	
1H	71	5.706	0.457	-0.001	0.000	0.000	0.291	1	0.00	0.02	0.05	
1I	71	0.104	0.324	0.000	0.000	-0.000	0.553	1	0.00	0.00	0.09	
1J	71	0.104	0.459	0.000	0.000	-0.000	0.286	1	0.00	0.00	0.05	
1K	71	0.104	0.324	-0.002	0.000	0.000	0.553	1	0.00	0.00	0.09	
1L	71	0.104	0.459	-0.002	0.000	0.000	0.286	1	0.00	0.00	0.05	
1M	71	4.462	0.324	0.000	0.000	-0.000	0.553	1	0.00	0.02	0.09	
1N	71	4.462	0.459	0.000	0.000	-0.000	0.286	1	0.00	0.02	0.05	
1O	71	4.462	0.324	-0.002	0.000	0.000	0.553	1	0.00	0.02	0.09	
1P	71	4.462	0.459	-0.002	0.000	0.000	0.286	1	0.00	0.02	0.05	
2	71	3.243	0.761	-0.001	0.000	0.000	0.796	1	0.01	0.01	0.13	
7	71	1.926	0.773	-0.002	0.000	0.001	0.590	1	0.01	0.01	0.10	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	kN	kN*m											
1A	-1.140	-0.000	0.549	1	0.1121	1.4174	0.9989	--	--	0.04	--	0.13	Snell. 'zx'= 245
1B	-1.140	-0.000	0.291	1	0.1121	1.4174	0.9984	--	--	0.04	--	0.09	Snell. 'zx'= 245

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1C	-1.140	-0.000	0.549	1	0.1121	0.9641	0.9989	--	--	0.04	--	0.13	Snell.	'zx' = 245
1D	-1.140	-0.000	0.291	1	0.1121	0.9641	0.9984	--	--	0.04	--	0.09	Snell.	'zx' = 245
1E	5.706	-0.000	0.549	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1F	5.706	-0.000	0.291	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1G	5.706	-0.000	0.549	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1H	5.706	-0.000	0.291	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1I	0.104	0.000	0.553	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1J	0.104	0.000	0.286	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1K	0.104	-0.001	0.553	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1L	0.104	-0.001	0.286	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1M	4.462	0.000	0.553	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1N	4.462	0.000	0.286	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1O	4.462	-0.001	0.553	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1P	4.462	-0.001	0.286	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
2	3.243	-0.000	0.796	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
7	1.926	-0.001	0.590	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245

ASTA NUM. 48 NI 77 NF 136 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							
1A	0	-1.374	-0.353	0.009	0.000	0.005	-0.254	1	0.00	0.01	0.04	
1B	0	-1.374	-0.178	0.009	0.000	0.005	-0.475	1	0.00	0.01	0.08	
1C	0	-1.374	-0.353	-0.002	0.000	-0.001	-0.254	1	0.00	0.01	0.04	
1D	0	-1.374	-0.178	-0.002	0.000	-0.001	-0.475	1	0.00	0.01	0.08	
1E	0	6.322	-0.353	0.009	0.000	0.005	-0.254	1	0.00	0.03	0.04	
1F	0	6.322	-0.178	0.009	0.000	0.005	-0.475	1	0.00	0.03	0.08	
1G	0	6.322	-0.353	-0.002	0.000	-0.001	-0.254	1	0.00	0.03	0.04	
1H	0	6.322	-0.178	-0.002	0.000	-0.001	-0.475	1	0.00	0.03	0.08	
1I	0	-1.428	-0.377	0.016	0.000	0.008	-0.230	1	0.00	0.01	0.04	
1J	0	-1.428	-0.154	0.016	0.000	0.008	-0.499	1	0.00	0.01	0.08	
1K	0	-1.428	-0.377	-0.009	0.000	-0.004	-0.230	1	0.00	0.01	0.04	
1L	0	-1.428	-0.154	-0.009	0.000	-0.004	-0.499	1	0.00	0.01	0.08	
1M	0	6.376	-0.377	0.016	0.000	0.008	-0.230	1	0.00	0.03	0.04	
1N	0	6.376	-0.154	0.016	0.000	0.008	-0.499	1	0.00	0.03	0.08	
1O	0	6.376	-0.377	-0.009	0.000	-0.004	-0.230	1	0.00	0.03	0.04	
1P	0	6.376	-0.154	-0.009	0.000	-0.004	-0.499	1	0.00	0.03	0.08	
2	0	3.302	-0.535	0.007	0.000	0.004	-0.681	1	0.00	0.01	0.11	
7	0	4.563	-0.463	0.014	0.000	0.007	-0.451	1	0.00	0.02	0.07	
1A	35	-1.374	-0.381	0.009	0.000	0.002	-0.341	1	0.00	0.01	0.06	
1B	35	-1.374	-0.206	0.009	0.000	0.002	-0.586	1	0.00	0.01	0.10	
1C	35	-1.374	-0.381	-0.002	0.000	-0.000	-0.341	1	0.00	0.01	0.06	
1D	35	-1.374	-0.206	-0.002	0.000	-0.000	-0.586	1	0.00	0.01	0.10	
1E	35	6.322	-0.381	0.009	0.000	0.002	-0.341	1	0.00	0.03	0.06	
1F	35	6.322	-0.206	0.009	0.000	0.002	-0.586	1	0.00	0.03	0.10	
1G	35	6.322	-0.381	-0.002	0.000	-0.000	-0.341	1	0.00	0.03	0.06	
1H	35	6.322	-0.206	-0.002	0.000	-0.000	-0.586	1	0.00	0.03	0.10	
1I	35	-1.428	-0.405	0.016	0.000	0.003	-0.329	1	0.00	0.01	0.05	
1J	35	-1.428	-0.182	0.016	0.000	0.003	-0.598	1	0.00	0.01	0.10	
1K	35	-1.428	-0.405	-0.009	0.000	-0.001	-0.329	1	0.00	0.01	0.05	
1L	35	-1.428	-0.182	-0.009	0.000	-0.001	-0.598	1	0.00	0.01	0.10	
1M	35	6.376	-0.405	0.016	0.000	0.003	-0.329	1	0.00	0.03	0.05	
1N	35	6.376	-0.182	0.016	0.000	0.003	-0.598	1	0.00	0.03	0.10	
1O	35	6.376	-0.405	-0.009	0.000	-0.001	-0.329	1	0.00	0.03	0.05	
1P	35	6.376	-0.182	-0.009	0.000	-0.001	-0.598	1	0.00	0.03	0.10	
2	35	3.302	-0.571	0.007	0.000	0.001	-0.877	1	0.00	0.01	0.14	
7	35	4.563	-0.499	0.014	0.000	0.002	-0.621	1	0.00	0.02	0.10	
1A	71	-1.374	-0.408	0.009	0.000	-0.002	-0.437	1	0.00	0.01	0.07	
1B	71	-1.374	-0.233	0.009	0.000	-0.002	-0.706	1	0.00	0.01	0.12	
1C	71	-1.374	-0.408	-0.002	0.000	0.000	-0.437	1	0.00	0.01	0.07	
1D	71	-1.374	-0.233	-0.002	0.000	0.000	-0.706	1	0.00	0.01	0.12	
1E	71	6.322	-0.408	0.009	0.000	-0.002	-0.437	1	0.00	0.03	0.07	
1F	71	6.322	-0.233	0.009	0.000	-0.002	-0.706	1	0.00	0.03	0.12	
1G	71	6.322	-0.408	-0.002	0.000	0.000	-0.437	1	0.00	0.03	0.07	
1H	71	6.322	-0.233	-0.002	0.000	0.000	-0.706	1	0.00	0.03	0.12	
1I	71	-1.428	-0.432	0.016	0.000	-0.003	-0.438	1	0.00	0.01	0.07	
1J	71	-1.428	-0.209	0.016	0.000	-0.003	-0.706	1	0.00	0.01	0.12	
1K	71	-1.428	-0.432	-0.009	0.000	0.002	-0.438	1	0.00	0.01	0.07	
1L	71	-1.428	-0.209	-0.009	0.000	0.002	-0.706	1	0.00	0.01	0.12	
1M	71	6.376	-0.432	0.016	0.000	-0.003	-0.438	1	0.00	0.03	0.07	
1N	71	6.376	-0.209	0.016	0.000	-0.003	-0.706	1	0.00	0.03	0.12	
1O	71	6.376	-0.432	-0.009	0.000	0.002	-0.438	1	0.00	0.03	0.07	
1P	71	6.376	-0.209	-0.009	0.000	0.002	-0.706	1	0.00	0.03	0.12	
2	71	3.302	-0.607	0.007	0.000	-0.001	-1.085	1	0.00	0.01	0.18	
7	71	4.563	-0.535	0.014	0.000	-0.003	-0.803	1	0.00	0.02	0.13	

Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota	
--	kN					kN*m								
1A	-1.374	0.005	-0.437	1	0.1121	0.9612	0.9991	--	--	0.05	--	0.13	Snell.	'zx' = 245
1B	-1.374	0.005	-0.706	1	0.1121	0.9612	0.9993	--	--	0.05	--	0.17	Snell.	'zx' = 245
1C	-1.374	-0.001	-0.437	1	0.1121	0.9567	0.9991	--	--	0.05	--	0.12	Snell.	'zx' = 245
1D	-1.374	-0.001	-0.706	1	0.1121	0.9567	0.9993	--	--	0.05	--	0.17	Snell.	'zx' = 245
1E	6.322	0.005	-0.437	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1F	6.322	0.005	-0.706	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1G	6.322	-0.001	-0.437	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1H	6.322	-0.001	-0.706	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx' = 245
1I	-1.428	0.008	-0.438	1	0.1121	0.9601	0.9989	--	--	0.05	--	0.14	Snell.	'zx' = 245
1J	-1.428	0.008	-0.706	1	0.1121	0.9601	0.9993	--	--	0.05	--	0.18	Snell.	'zx' = 245

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1K	-1.428	-0.004	-0.438	1	0.1121	0.9580	0.9989	--	--	0.05	--	0.13	Snell.	'zx'= 245
1L	-1.428	-0.004	-0.706	1	0.1121	0.9580	0.9993	--	--	0.05	--	0.18	Snell.	'zx'= 245
1M	6.376	0.008	-0.438	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1N	6.376	0.008	-0.706	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1O	6.376	-0.004	-0.438	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1P	6.376	-0.004	-0.706	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
2	3.302	0.004	-1.085	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
7	4.563	0.007	-0.803	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245

**ASTA NUM. 49** NI 84 NF 136 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.

qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m			--	--	--	--	--
1A	0	-8.881	0.654	0.004	0.000	0.002	-0.036	1	0.00	0.04	0.01	
1B	0	-8.881	0.878	0.004	0.000	0.002	-0.242	1	0.01	0.04	0.04	
1C	0	-8.881	0.654	-0.001	0.000	-0.001	-0.036	1	0.00	0.04	0.01	
1D	0	-8.881	0.878	-0.001	0.000	-0.001	-0.242	1	0.01	0.04	0.04	
1E	0	1.071	0.654	0.004	0.000	0.002	-0.036	1	0.00	0.00	0.01	
1F	0	1.071	0.878	0.004	0.000	0.002	-0.242	1	0.01	0.00	0.04	
1G	0	1.071	0.654	-0.001	0.000	-0.001	-0.036	1	0.00	0.00	0.01	
1H	0	1.071	0.878	-0.001	0.000	-0.001	-0.242	1	0.01	0.00	0.04	
1I	0	-8.951	0.617	0.007	0.000	0.004	-0.001	1	0.00	0.04	0.01	
1J	0	-8.951	0.914	0.007	0.000	0.004	-0.277	1	0.01	0.04	0.05	
1K	0	-8.951	0.617	-0.004	0.000	-0.002	-0.001	1	0.00	0.04	0.00	
1L	0	-8.951	0.914	-0.004	0.000	-0.002	-0.277	1	0.01	0.04	0.05	
1M	0	1.141	0.617	0.007	0.000	0.004	-0.001	1	0.00	0.00	0.01	
1N	0	1.141	0.914	0.007	0.000	0.004	-0.277	1	0.01	0.00	0.05	
1O	0	1.141	0.617	-0.004	0.000	-0.002	-0.001	1	0.00	0.00	0.00	
1P	0	1.141	0.914	-0.004	0.000	-0.002	-0.277	1	0.01	0.00	0.05	
2	0	-5.378	1.411	0.002	0.000	0.001	-0.245	1	0.01	0.02	0.04	
7	0	-7.070	1.327	0.007	0.000	0.004	-0.429	1	0.01	0.03	0.07	
1A	35	-8.881	0.626	0.004	0.000	0.001	0.242	1	0.00	0.04	0.04	
1B	35	-8.881	0.850	0.004	0.000	0.001	0.012	1	0.01	0.04	0.00	
1C	35	-8.881	0.626	-0.001	0.000	-0.000	0.242	1	0.00	0.04	0.04	
1D	35	-8.881	0.850	-0.001	0.000	-0.000	0.012	1	0.01	0.04	0.00	
1E	35	1.071	0.626	0.004	0.000	0.001	0.242	1	0.00	0.00	0.04	
1F	35	1.071	0.850	0.004	0.000	0.001	0.012	1	0.01	0.00	0.00	
1G	35	1.071	0.626	-0.001	0.000	-0.000	0.242	1	0.00	0.00	0.04	
1H	35	1.071	0.850	-0.001	0.000	-0.000	0.012	1	0.01	0.00	0.00	
1I	35	-8.951	0.589	0.007	0.000	0.002	0.257	1	0.00	0.04	0.04	
1J	35	-8.951	0.887	0.007	0.000	0.002	-0.004	1	0.01	0.04	0.00	
1K	35	-8.951	0.589	-0.004	0.000	-0.001	0.257	1	0.00	0.04	0.04	
1L	35	-8.951	0.887	-0.004	0.000	-0.001	-0.004	1	0.01	0.04	0.00	
1M	35	1.141	0.589	0.007	0.000	0.002	0.257	1	0.00	0.00	0.04	
1N	35	1.141	0.887	0.007	0.000	0.002	-0.004	1	0.01	0.00	0.00	
1O	35	1.141	0.589	-0.004	0.000	-0.001	0.257	1	0.00	0.00	0.04	
1P	35	1.141	0.887	-0.004	0.000	-0.001	-0.004	1	0.01	0.00	0.00	
2	35	-5.378	1.375	0.002	0.000	0.001	0.247	1	0.01	0.02	0.04	
7	35	-7.070	1.291	0.007	0.000	0.001	0.034	1	0.01	0.03	0.01	
1A	71	-8.881	0.598	0.004	0.000	-0.001	0.510	1	0.00	0.04	0.08	
1B	71	-8.881	0.823	0.004	0.000	-0.001	0.255	1	0.01	0.04	0.04	
1C	71	-8.881	0.598	-0.001	0.000	0.000	0.510	1	0.00	0.04	0.08	
1D	71	-8.881	0.823	-0.001	0.000	0.000	0.255	1	0.01	0.04	0.04	
1E	71	1.071	0.598	0.004	0.000	-0.001	0.510	1	0.00	0.00	0.08	
1F	71	1.071	0.823	0.004	0.000	-0.001	0.255	1	0.01	0.00	0.04	
1G	71	1.071	0.598	-0.001	0.000	0.000	0.510	1	0.00	0.00	0.08	
1H	71	1.071	0.823	-0.001	0.000	0.000	0.255	1	0.01	0.00	0.04	
1I	71	-8.951	0.562	0.007	0.000	-0.001	0.505	1	0.00	0.04	0.08	
1J	71	-8.951	0.859	0.007	0.000	-0.001	0.260	1	0.01	0.04	0.04	
1K	71	-8.951	0.562	-0.004	0.000	0.001	0.505	1	0.00	0.04	0.08	
1L	71	-8.951	0.859	-0.004	0.000	0.001	0.260	1	0.01	0.04	0.04	
1M	71	1.141	0.562	0.007	0.000	-0.001	0.505	1	0.00	0.00	0.08	
1N	71	1.141	0.859	0.007	0.000	-0.001	0.260	1	0.01	0.00	0.04	
1O	71	1.141	0.562	-0.004	0.000	0.001	0.505	1	0.00	0.00	0.08	
1P	71	1.141	0.859	-0.004	0.000	0.001	0.260	1	0.01	0.00	0.04	
2	71	-5.377	1.338	0.002	0.000	-0.000	0.727	1	0.01	0.02	0.12	
7	71	-7.070	1.255	0.007	0.000	-0.001	0.484	1	0.01	0.03	0.08	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χ <sub>LT</sub>	I.S.n.	I.S.m.	I.S.	Nota
--	kN		kN*m		--	--	--	--	--	--	--	--	--
1A	-8.881	0.002	0.510	1	0.1121	0.8721	0.9850	--	--	0.33	--	0.41	Snell. 'zx'= 245
1B	-8.881	0.002	0.255	1	0.1121	0.8721	0.9730	--	--	0.33	--	0.37	Snell. 'zx'= 245
1C	-8.881	-0.001	0.510	1	0.1121	0.7204	0.9850	--	--	0.33	--	0.41	Snell. 'zx'= 245
1D	-8.881	-0.001	0.255	1	0.1121	0.7204	0.9730	--	--	0.33	--	0.37	Snell. 'zx'= 245
1E	1.071	0.002	0.510	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	1.071	0.002	0.255	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	1.071	-0.001	0.510	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	1.071	-0.001	0.255	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-8.951	0.004	0.505	1	0.1121	0.8745	0.9859	--	--	0.33	--	0.42	Snell. 'zx'= 245
1J	-8.951	0.004	-0.277	1	0.1121	0.8745	0.9729	--	--	0.33	--	0.38	Snell. 'zx'= 245
1K	-8.951	-0.002	0.505	1	0.1121	0.8327	0.9859	--	--	0.33	--	0.41	Snell. 'zx'= 245
1L	-8.951	-0.002	-0.277	1	0.1121	0.8327	0.9729	--	--	0.33	--	0.38	Snell. 'zx'= 245
1M	1.141	0.004	0.505	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	1.141	0.004	-0.277	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	1.141	-0.002	0.505	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	1.141	-0.002	-0.277	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	-5.378	0.001	0.726	1	0.1121	1.0102	0.9887	--	--	0.20	--	0.32	Snell. 'zx'= 245
7	-7.070	0.004	0.483	1	0.1121	0.9044	0.9791	--	--	0.26	--	0.34	Snell. 'zx'= 245

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

ASTA NUM. 50 NI 129 NF 135 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-2.989	0.473	0.002	0.000	0.001	-0.173	1	0.00	0.01	0.03	
1B	0	-2.989	0.731	0.002	0.000	0.001	-0.442	1	0.01	0.01	0.07	
1C	0	-2.989	0.473	-0.002	0.000	-0.001	-0.173	1	0.00	0.01	0.03	
1D	0	-2.989	0.731	-0.002	0.000	-0.001	-0.442	1	0.01	0.01	0.07	
1E	0	2.479	0.473	0.002	0.000	0.001	-0.173	1	0.00	0.01	0.03	
1F	0	2.479	0.731	0.002	0.000	0.001	-0.442	1	0.01	0.01	0.07	
1G	0	2.479	0.473	-0.002	0.000	-0.001	-0.173	1	0.00	0.01	0.03	
1H	0	2.479	0.731	-0.002	0.000	-0.001	-0.442	1	0.01	0.01	0.07	
1I	0	-3.407	0.408	0.003	0.000	0.001	-0.124	1	0.00	0.01	0.02	
1J	0	-3.407	0.796	0.003	0.000	0.001	-0.491	1	0.01	0.01	0.08	
1K	0	-3.407	0.408	-0.003	0.000	-0.001	-0.124	1	0.00	0.01	0.02	
1L	0	-3.407	0.796	-0.003	0.000	-0.001	-0.491	1	0.01	0.01	0.08	
1M	0	2.898	0.408	0.003	0.000	0.001	-0.124	1	0.00	0.01	0.02	
1N	0	2.898	0.796	0.003	0.000	0.001	-0.491	1	0.01	0.01	0.08	
1O	0	2.898	0.408	-0.003	0.000	-0.001	-0.124	1	0.00	0.01	0.02	
1P	0	2.898	0.796	-0.003	0.000	-0.001	-0.491	1	0.01	0.01	0.08	
2	0	-0.576	1.161	-0.000	0.000	0.000	-0.573	1	0.01	0.00	0.09	
7	0	-0.380	0.570	-0.004	0.000	-0.002	-0.347	1	0.00	0.00	0.06	
1A	35	-2.988	0.445	0.002	0.000	0.000	0.021	1	0.00	0.01	0.00	
1B	35	-2.988	0.703	0.002	0.000	0.000	-0.221	1	0.01	0.01	0.04	
1C	35	-2.988	0.445	-0.002	0.000	-0.000	0.021	1	0.00	0.01	0.00	
1D	35	-2.988	0.703	-0.002	0.000	-0.000	-0.221	1	0.01	0.01	0.04	
1E	35	2.479	0.445	0.002	0.000	0.000	0.021	1	0.00	0.01	0.00	
1F	35	2.479	0.703	0.002	0.000	0.000	-0.221	1	0.01	0.01	0.04	
1G	35	2.479	0.445	-0.002	0.000	-0.000	0.021	1	0.00	0.01	0.00	
1H	35	2.479	0.703	-0.002	0.000	-0.000	-0.221	1	0.01	0.01	0.04	
1I	35	-3.407	0.380	0.003	0.000	0.001	0.036	1	0.00	0.01	0.01	
1J	35	-3.407	0.768	0.003	0.000	0.001	-0.235	1	0.01	0.01	0.04	
1K	35	-3.407	0.380	-0.003	0.000	-0.000	0.036	1	0.00	0.01	0.01	
1L	35	-3.407	0.768	-0.003	0.000	-0.000	-0.235	1	0.01	0.01	0.04	
1M	35	2.898	0.380	0.003	0.000	0.001	0.036	1	0.00	0.01	0.01	
1N	35	2.898	0.768	0.003	0.000	0.001	-0.235	1	0.01	0.01	0.04	
1O	35	2.898	0.380	-0.003	0.000	-0.000	0.036	1	0.00	0.01	0.01	
1P	35	2.898	0.768	-0.003	0.000	-0.000	-0.235	1	0.01	0.01	0.04	
2	35	-0.576	1.125	-0.000	0.000	0.000	-0.169	1	0.01	0.00	0.03	
7	35	-0.380	0.534	-0.004	0.000	-0.001	-0.152	1	0.00	0.00	0.02	
1A	71	-2.988	0.418	0.002	0.000	-0.000	0.205	1	0.00	0.01	0.03	
1B	71	-2.988	0.675	0.002	0.000	-0.000	-0.009	1	0.00	0.01	0.00	
1C	71	-2.988	0.418	-0.002	0.000	0.000	0.205	1	0.00	0.01	0.03	
1D	71	-2.988	0.675	-0.002	0.000	0.000	-0.009	1	0.00	0.01	0.00	
1E	71	2.480	0.418	0.002	0.000	-0.000	0.205	1	0.00	0.01	0.03	
1F	71	2.480	0.675	0.002	0.000	-0.000	-0.009	1	0.00	0.01	0.00	
1G	71	2.480	0.418	-0.002	0.000	0.000	0.205	1	0.00	0.01	0.03	
1H	71	2.480	0.675	-0.002	0.000	0.000	-0.009	1	0.00	0.01	0.00	
1I	71	-3.407	0.353	0.003	0.000	-0.000	0.185	1	0.00	0.01	0.03	
1J	71	-3.407	0.740	0.003	0.000	-0.000	0.011	1	0.01	0.01	0.00	
1K	71	-3.407	0.353	-0.003	0.000	0.000	0.185	1	0.00	0.01	0.03	
1L	71	-3.407	0.740	-0.003	0.000	0.000	0.011	1	0.01	0.01	0.00	
1M	71	2.898	0.353	0.003	0.000	-0.000	0.185	1	0.00	0.01	0.03	
1N	71	2.898	0.740	0.003	0.000	-0.000	0.011	1	0.01	0.01	0.00	
1O	71	2.898	0.353	-0.003	0.000	0.000	0.185	1	0.00	0.01	0.03	
1P	71	2.898	0.740	-0.003	0.000	0.000	0.011	1	0.01	0.01	0.00	
2	71	-0.576	1.089	-0.000	0.000	0.000	0.222	1	0.01	0.00	0.04	
7	71	-0.380	0.498	-0.004	0.000	0.001	0.031	1	0.00	0.00	0.01	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-2.989	0.001	0.205	1	0.1121	0.9907	0.9914	--	--	0.11	--	0.15	Snell. 'zx'= 245
1B	-2.989	0.001	-0.442	1	0.1121	0.9907	0.9954	--	--	0.11	--	0.18	Snell. 'zx'= 245
1C	-2.989	-0.001	0.205	1	0.1121	0.9069	0.9914	--	--	0.11	--	0.14	Snell. 'zx'= 245
1D	-2.989	-0.001	-0.442	1	0.1121	0.9069	0.9954	--	--	0.11	--	0.18	Snell. 'zx'= 245
1E	2.480	0.001	0.205	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	2.480	0.001	-0.442	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	2.480	-0.001	0.205	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	2.480	-0.001	-0.442	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-3.407	0.001	0.185	1	0.1121	0.9842	0.9912	--	--	0.13	--	0.16	Snell. 'zx'= 245
1J	-3.407	0.001	-0.491	1	0.1121	0.9842	0.9945	--	--	0.13	--	0.21	Snell. 'zx'= 245
1K	-3.407	-0.001	0.185	1	0.1121	0.9090	0.9912	--	--	0.13	--	0.16	Snell. 'zx'= 245
1L	-3.407	-0.001	-0.491	1	0.1121	0.9090	0.9945	--	--	0.13	--	0.21	Snell. 'zx'= 245
1M	2.898	0.001	0.185	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	2.898	0.001	-0.491	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	2.898	-0.001	0.185	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	2.898	-0.001	-0.491	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	-0.576	0.000	-0.573	1	0.1121	1.0457	0.9987	--	--	0.02	--	0.12	Snell. 'zx'= 245
7	-0.380	-0.002	-0.347	1	0.1121	0.9913	0.9994	--	--	0.01	--	0.07	Snell. 'zx'= 245

ASTA NUM. 51 NI 150 NF 135 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
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# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

--		-----			-----			-----			
cm		kN			kN*m						
1A	0	-2.253	-0.151	0.007	0.000	0.004	-0.072	1	0.00	0.01	0.01
1B	0	-2.253	-0.004	0.007	0.000	0.004	-0.271	1	0.00	0.01	0.04
1C	0	-2.253	-0.151	-0.002	0.000	-0.001	-0.072	1	0.00	0.01	0.01
1D	0	-2.253	-0.004	-0.002	0.000	-0.001	-0.271	1	0.00	0.01	0.04
1E	0	2.693	-0.151	0.007	0.000	0.004	-0.072	1	0.00	0.01	0.01
1F	0	2.693	-0.004	0.007	0.000	0.004	-0.271	1	0.00	0.01	0.04
1G	0	2.693	-0.151	-0.002	0.000	-0.001	-0.072	1	0.00	0.01	0.01
1H	0	2.693	-0.004	-0.002	0.000	-0.001	-0.271	1	0.00	0.01	0.04
1I	0	-2.560	-0.172	0.009	0.000	0.004	-0.079	1	0.00	0.01	0.01
1J	0	-2.560	0.016	0.009	0.000	0.004	-0.263	1	0.00	0.01	0.04
1K	0	-2.560	-0.172	-0.004	0.000	-0.002	-0.079	1	0.00	0.01	0.01
1L	0	-2.560	0.016	-0.004	0.000	-0.002	-0.263	1	0.00	0.01	0.04
1M	0	3.001	-0.172	0.009	0.000	0.004	-0.079	1	0.00	0.01	0.01
1N	0	3.001	0.016	0.009	0.000	0.004	-0.263	1	0.00	0.01	0.04
1O	0	3.001	-0.172	-0.004	0.000	-0.002	-0.079	1	0.00	0.01	0.01
1P	0	3.001	0.016	-0.004	0.000	-0.002	-0.263	1	0.00	0.01	0.04
2	0	0.505	-0.178	0.005	0.000	0.002	-0.370	1	0.00	0.00	0.06
7	0	-0.796	-0.147	-0.006	0.000	-0.003	-0.029	1	0.00	0.00	0.00
-----											
1A	35	-2.252	-0.179	0.007	0.000	0.001	-0.101	1	0.00	0.01	0.02
1B	35	-2.252	-0.032	0.007	0.000	0.001	-0.306	1	0.00	0.01	0.05
1C	35	-2.252	-0.179	-0.002	0.000	-0.000	-0.101	1	0.00	0.01	0.02
1D	35	-2.252	-0.032	-0.002	0.000	-0.000	-0.306	1	0.00	0.01	0.05
1E	35	2.694	-0.179	0.007	0.000	0.001	-0.101	1	0.00	0.01	0.02
1F	35	2.694	-0.032	0.007	0.000	0.001	-0.306	1	0.00	0.01	0.05
1G	35	2.694	-0.179	-0.002	0.000	-0.000	-0.101	1	0.00	0.01	0.02
1H	35	2.694	-0.032	-0.002	0.000	-0.000	-0.306	1	0.00	0.01	0.05
1I	35	-2.560	-0.199	0.009	0.000	0.001	-0.119	1	0.00	0.01	0.02
1J	35	-2.560	-0.011	0.009	0.000	0.001	-0.289	1	0.00	0.01	0.05
1K	35	-2.560	-0.199	-0.004	0.000	-0.001	-0.119	1	0.00	0.01	0.02
1L	35	-2.560	-0.011	-0.004	0.000	-0.001	-0.289	1	0.00	0.01	0.05
1M	35	3.001	-0.199	0.009	0.000	0.001	-0.119	1	0.00	0.01	0.02
1N	35	3.001	-0.011	0.009	0.000	0.001	-0.289	1	0.00	0.01	0.05
1O	35	3.001	-0.199	-0.004	0.000	-0.001	-0.119	1	0.00	0.01	0.02
1P	35	3.001	-0.011	-0.004	0.000	-0.001	-0.289	1	0.00	0.01	0.05
2	35	0.505	-0.214	0.005	0.000	0.001	-0.439	1	0.00	0.00	0.07
7	35	-0.796	-0.183	-0.006	0.000	-0.001	-0.087	1	0.00	0.00	0.01
-----											
1A	71	-2.252	-0.207	0.007	0.000	-0.001	-0.140	1	0.00	0.01	0.02
1B	71	-2.252	-0.059	0.007	0.000	-0.001	-0.352	1	0.00	0.01	0.06
1C	71	-2.252	-0.207	-0.002	0.000	0.000	-0.140	1	0.00	0.01	0.02
1D	71	-2.252	-0.059	-0.002	0.000	0.000	-0.352	1	0.00	0.01	0.06
1E	71	2.694	-0.207	0.007	0.000	-0.001	-0.140	1	0.00	0.01	0.02
1F	71	2.694	-0.059	0.007	0.000	-0.001	-0.352	1	0.00	0.01	0.06
1G	71	2.694	-0.207	-0.002	0.000	0.000	-0.140	1	0.00	0.01	0.02
1H	71	2.694	-0.059	-0.002	0.000	0.000	-0.352	1	0.00	0.01	0.06
1I	71	-2.560	-0.227	0.009	0.000	-0.002	-0.168	1	0.00	0.01	0.03
1J	71	-2.560	-0.039	0.009	0.000	-0.002	-0.324	1	0.00	0.01	0.05
1K	71	-2.560	-0.227	-0.004	0.000	0.001	-0.168	1	0.00	0.01	0.03
1L	71	-2.560	-0.039	-0.004	0.000	0.001	-0.324	1	0.00	0.01	0.05
1M	71	3.001	-0.227	0.009	0.000	-0.002	-0.168	1	0.00	0.01	0.03
1N	71	3.001	-0.039	0.009	0.000	-0.002	-0.324	1	0.00	0.01	0.05
1O	71	3.001	-0.227	-0.004	0.000	0.001	-0.168	1	0.00	0.01	0.03
1P	71	3.001	-0.039	-0.004	0.000	0.001	-0.324	1	0.00	0.01	0.05
2	71	0.505	-0.250	0.005	0.000	-0.001	-0.521	1	0.00	0.00	0.09
7	71	-0.796	-0.219	-0.006	0.000	0.001	-0.158	1	0.00	0.00	0.03

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
--	-----	-----	-----										
	kN	kN*m											
1A	-2.253	0.004	-0.140	1	0.1121	0.9317	0.9983	--	--	0.08	--	0.11	Snell. 'zx'= 245
1B	-2.253	0.004	-0.352	1	0.1121	0.9317	0.9991	--	--	0.08	--	0.15	Snell. 'zx'= 245
1C	-2.253	-0.001	-0.140	1	0.1121	0.9327	0.9983	--	--	0.08	--	0.11	Snell. 'zx'= 245
1D	-2.253	-0.001	-0.352	1	0.1121	0.9327	0.9991	--	--	0.08	--	0.14	Snell. 'zx'= 245
1E	2.694	0.004	-0.140	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	2.694	0.004	-0.352	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	2.694	-0.001	-0.140	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	2.694	-0.001	-0.352	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-2.560	0.004	-0.168	1	0.1121	0.9214	0.9979	--	--	0.09	--	0.13	Snell. 'zx'= 245
1J	-2.560	0.004	-0.324	1	0.1121	0.9214	0.9992	--	--	0.09	--	0.15	Snell. 'zx'= 245
1K	-2.560	-0.002	-0.168	1	0.1121	0.9209	0.9979	--	--	0.09	--	0.12	Snell. 'zx'= 245
1L	-2.560	-0.002	-0.324	1	0.1121	0.9209	0.9992	--	--	0.09	--	0.15	Snell. 'zx'= 245
1M	3.001	0.004	-0.168	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	3.001	0.004	-0.324	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	3.001	-0.002	-0.168	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	3.001	-0.002	-0.324	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	0.505	0.002	-0.521	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
7	-0.796	-0.003	-0.158	1	0.1121	0.9797	0.9990	--	--	0.03	--	0.06	Snell. 'zx'= 245

**ASTA NUM. 52** NI 33 NF 134 Lung. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	-----	-----	-----	-----	-----	-----	-----					
	cm	kN			kN*m							
1A	0	-4.339	-0.128	0.005	0.000	0.003	-0.062	1	0.00	0.02	0.01	
1B	0	-4.339	0.066	0.005	0.000	0.003	-0.265	1	0.00	0.02	0.04	
1C	0	-4.339	-0.128	-0.004	0.000	-0.002	-0.062	1	0.00	0.02	0.01	
1D	0	-4.339	0.066	-0.004	0.000	-0.002	-0.265	1	0.00	0.02	0.04	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1E	0	1.317	-0.128	0.005	0.000	0.003	-0.062	1	0.00	0.01	0.01
1F	0	1.317	0.066	0.005	0.000	0.003	-0.265	1	0.00	0.01	0.04
1G	0	1.317	-0.128	-0.004	0.000	-0.002	-0.062	1	0.00	0.01	0.01
1H	0	1.317	0.066	-0.004	0.000	-0.002	-0.265	1	0.00	0.01	0.04
1I	0	-4.939	-0.136	0.012	0.000	0.006	-0.047	1	0.00	0.02	0.01
1J	0	-4.939	0.074	0.012	0.000	0.006	-0.280	1	0.00	0.02	0.05
1K	0	-4.939	-0.136	-0.011	0.000	-0.006	-0.047	1	0.00	0.02	0.01
1L	0	-4.939	0.074	-0.011	0.000	-0.006	-0.280	1	0.00	0.02	0.05
1M	0	1.917	-0.136	0.012	0.000	0.006	-0.047	1	0.00	0.01	0.01
1N	0	1.917	0.074	0.012	0.000	0.006	-0.280	1	0.00	0.01	0.05
1O	0	1.917	-0.136	-0.011	0.000	-0.006	-0.047	1	0.00	0.01	0.01
1P	0	1.917	0.074	-0.011	0.000	-0.006	-0.280	1	0.00	0.01	0.05
2	0	-2.738	-0.064	0.001	0.000	0.000	-0.308	1	0.00	0.01	0.05
7	0	-8.383	-0.108	0.000	0.000	0.000	-0.060	1	0.00	0.03	0.01
1A	35	-4.339	-0.156	0.005	0.000	0.001	-0.053	1	0.00	0.02	0.01
1B	35	-4.339	0.038	0.005	0.000	0.001	-0.306	1	0.00	0.02	0.05
1C	35	-4.339	-0.156	-0.004	0.000	-0.001	-0.053	1	0.00	0.02	0.01
1D	35	-4.339	0.038	-0.004	0.000	-0.001	-0.306	1	0.00	0.02	0.05
1E	35	1.317	-0.156	0.005	0.000	0.001	-0.053	1	0.00	0.01	0.01
1F	35	1.317	0.038	0.005	0.000	0.001	-0.306	1	0.00	0.01	0.05
1G	35	1.317	-0.156	-0.004	0.000	-0.001	-0.053	1	0.00	0.01	0.01
1H	35	1.317	0.038	-0.004	0.000	-0.001	-0.306	1	0.00	0.01	0.05
1I	35	-4.939	-0.164	0.012	0.000	0.002	-0.033	1	0.00	0.02	0.01
1J	35	-4.939	0.046	0.012	0.000	0.002	-0.326	1	0.00	0.02	0.05
1K	35	-4.939	-0.164	-0.011	0.000	-0.002	-0.033	1	0.00	0.02	0.01
1L	35	-4.939	0.046	-0.011	0.000	-0.002	-0.326	1	0.00	0.02	0.05
1M	35	1.917	-0.164	0.012	0.000	0.002	-0.033	1	0.00	0.01	0.01
1N	35	1.917	0.046	0.012	0.000	0.002	-0.326	1	0.00	0.01	0.05
1O	35	1.917	-0.164	-0.011	0.000	-0.002	-0.033	1	0.00	0.01	0.01
1P	35	1.917	0.046	-0.011	0.000	-0.002	-0.326	1	0.00	0.01	0.05
2	35	-2.737	-0.100	0.001	0.000	0.000	-0.337	1	0.00	0.01	0.06
7	35	-8.383	-0.144	0.000	0.000	0.000	-0.105	1	0.00	0.03	0.02
1A	71	-4.339	-0.184	0.005	0.000	-0.001	-0.053	1	0.00	0.02	0.01
1B	71	-4.339	0.010	0.005	0.000	-0.001	-0.357	1	0.00	0.02	0.06
1C	71	-4.339	-0.184	-0.004	0.000	0.001	-0.053	1	0.00	0.02	0.01
1D	71	-4.339	0.010	-0.004	0.000	0.001	-0.357	1	0.00	0.02	0.06
1E	71	1.317	-0.184	0.005	0.000	-0.001	-0.053	1	0.00	0.01	0.01
1F	71	1.317	0.010	0.005	0.000	-0.001	-0.357	1	0.00	0.01	0.06
1G	71	1.317	-0.184	-0.004	0.000	0.001	-0.053	1	0.00	0.01	0.01
1H	71	1.317	0.010	-0.004	0.000	0.001	-0.357	1	0.00	0.01	0.06
1I	71	-4.939	-0.192	0.012	0.000	-0.002	-0.028	1	0.00	0.02	0.00
1J	71	-4.939	0.018	0.012	0.000	-0.002	-0.382	1	0.00	0.02	0.06
1K	71	-4.939	-0.192	-0.011	0.000	0.002	-0.028	1	0.00	0.02	0.00
1L	71	-4.939	0.018	-0.011	0.000	0.002	-0.382	1	0.00	0.02	0.06
1M	71	1.917	-0.192	0.012	0.000	-0.002	-0.028	1	0.00	0.01	0.00
1N	71	1.917	0.018	0.012	0.000	-0.002	-0.382	1	0.00	0.01	0.06
1O	71	1.917	-0.192	-0.011	0.000	0.002	-0.028	1	0.00	0.01	0.00
1P	71	1.917	0.018	-0.011	0.000	0.002	-0.382	1	0.00	0.01	0.06
2	71	-2.737	-0.136	0.001	0.000	-0.000	-0.378	1	0.00	0.01	0.06
7	71	-8.383	-0.180	0.000	0.000	0.000	-0.162	1	0.00	0.03	0.03

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-4.339	0.003	-0.062	1	0.1121	0.8728	0.9989	--	--	0.16	--	0.17	Snell. 'zx'= 245
1B	-4.339	0.003	-0.357	1	0.1121	0.8728	0.9981	--	--	0.16	--	0.22	Snell. 'zx'= 245
1C	-4.339	-0.002	-0.062	1	0.1121	0.8634	0.9989	--	--	0.16	--	0.17	Snell. 'zx'= 245
1D	-4.339	-0.002	-0.357	1	0.1121	0.8634	0.9981	--	--	0.16	--	0.22	Snell. 'zx'= 245
1E	1.317	0.003	-0.062	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	1.317	0.003	-0.357	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	1.317	-0.002	-0.062	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	1.317	-0.002	-0.357	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-4.939	0.006	-0.047	1	0.1121	0.8494	0.9969	--	--	0.18	--	0.20	Snell. 'zx'= 245
1J	-4.939	0.006	-0.382	1	0.1121	0.8494	0.9978	--	--	0.18	--	0.25	Snell. 'zx'= 245
1K	-4.939	-0.006	-0.047	1	0.1121	0.8445	0.9969	--	--	0.18	--	0.20	Snell. 'zx'= 245
1L	-4.939	-0.006	-0.382	1	0.1121	0.8445	0.9978	--	--	0.18	--	0.25	Snell. 'zx'= 245
1M	1.917	0.006	-0.047	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	1.917	0.006	-0.382	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	1.917	-0.006	-0.047	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	1.917	-0.006	-0.382	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	-2.738	0.000	-0.378	1	0.1121	0.9731	0.9991	--	--	0.10	--	0.16	Snell. 'zx'= 245
7	-8.383	0.000	-0.162	1	0.1121	1.2407	0.9917	--	--	0.31	--	0.33	Snell. 'zx'= 245

ASTA NUM. 53 NI 2 NF 134 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-1.495	0.332	0.001	0.000	0.001	-0.140	1	0.00	0.01	0.02	
1B	0	-1.495	0.645	0.001	0.000	0.001	-0.350	1	0.00	0.01	0.06	
1C	0	-1.495	0.332	-0.003	0.000	-0.001	-0.140	1	0.00	0.01	0.02	
1D	0	-1.495	0.645	-0.003	0.000	-0.001	-0.350	1	0.00	0.01	0.06	
1E	0	4.015	0.332	0.001	0.000	0.001	-0.140	1	0.00	0.02	0.02	
1F	0	4.015	0.645	0.001	0.000	0.001	-0.350	1	0.00	0.02	0.06	
1G	0	4.015	0.332	-0.003	0.000	-0.001	-0.140	1	0.00	0.02	0.02	
1H	0	4.015	0.645	-0.003	0.000	-0.001	-0.350	1	0.00	0.02	0.06	
1I	0	-2.059	0.315	0.003	0.000	0.002	-0.154	1	0.00	0.01	0.03	
1J	0	-2.059	0.662	0.003	0.000	0.002	-0.337	1	0.00	0.01	0.06	
1K	0	-2.059	0.315	-0.004	0.000	-0.002	-0.154	1	0.00	0.01	0.03	
1L	0	-2.059	0.662	-0.004	0.000	-0.002	-0.337	1	0.00	0.01	0.06	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1M	0	4.579	0.315	0.003	0.000	0.002	-0.154	1	0.00	0.02	0.03
1N	0	4.579	0.662	0.003	0.000	0.002	-0.337	1	0.00	0.02	0.06
1O	0	4.579	0.315	-0.004	0.000	-0.002	-0.154	1	0.00	0.02	0.03
1P	0	4.579	0.662	-0.004	0.000	-0.002	-0.337	1	0.00	0.02	0.06
2	0	2.265	0.896	-0.001	0.000	-0.000	-0.469	1	0.01	0.01	0.08
7	0	8.225	0.589	-0.003	0.000	-0.001	-0.386	1	0.00	0.03	0.06
1A	35	-1.494	0.304	0.001	0.000	0.000	0.046	1	0.00	0.01	0.01
1B	35	-1.494	0.617	0.001	0.000	0.000	-0.201	1	0.00	0.01	0.03
1C	35	-1.494	0.304	-0.003	0.000	-0.000	0.046	1	0.00	0.01	0.01
1D	35	-1.494	0.617	-0.003	0.000	-0.000	-0.201	1	0.00	0.01	0.03
1E	35	4.015	0.304	0.001	0.000	0.000	0.046	1	0.00	0.02	0.01
1F	35	4.015	0.617	0.001	0.000	0.000	-0.201	1	0.00	0.02	0.03
1G	35	4.015	0.304	-0.003	0.000	-0.000	0.046	1	0.00	0.02	0.01
1H	35	4.015	0.617	-0.003	0.000	-0.000	-0.201	1	0.00	0.02	0.03
1I	35	-2.058	0.287	0.003	0.000	0.001	0.049	1	0.00	0.01	0.01
1J	35	-2.058	0.635	0.003	0.000	0.001	-0.204	1	0.00	0.01	0.03
1K	35	-2.058	0.287	-0.004	0.000	-0.001	0.049	1	0.00	0.01	0.01
1L	35	-2.058	0.635	-0.004	0.000	-0.001	-0.204	1	0.00	0.01	0.03
1M	35	4.579	0.287	0.003	0.000	0.001	0.049	1	0.00	0.02	0.01
1N	35	4.579	0.635	0.003	0.000	0.001	-0.204	1	0.00	0.02	0.03
1O	35	4.579	0.287	-0.004	0.000	-0.001	0.049	1	0.00	0.02	0.01
1P	35	4.579	0.635	-0.004	0.000	-0.001	-0.204	1	0.00	0.02	0.03
2	35	2.266	0.860	-0.001	0.000	-0.000	-0.159	1	0.01	0.01	0.03
7	35	8.225	0.553	-0.003	0.000	-0.000	-0.184	1	0.00	0.03	0.03
1A	71	-1.494	0.276	0.001	0.000	-0.000	0.222	1	0.00	0.01	0.04
1B	71	-1.494	0.590	0.001	0.000	-0.000	-0.061	1	0.00	0.01	0.01
1C	71	-1.494	0.276	-0.003	0.000	0.000	0.222	1	0.00	0.01	0.04
1D	71	-1.494	0.590	-0.003	0.000	0.000	-0.061	1	0.00	0.01	0.01
1E	71	4.016	0.276	0.001	0.000	-0.000	0.222	1	0.00	0.02	0.04
1F	71	4.016	0.590	0.001	0.000	-0.000	-0.061	1	0.00	0.02	0.01
1G	71	4.016	0.276	-0.003	0.000	0.000	0.222	1	0.00	0.02	0.04
1H	71	4.016	0.590	-0.003	0.000	0.000	-0.061	1	0.00	0.02	0.01
1I	71	-2.058	0.259	0.003	0.000	-0.000	0.242	1	0.00	0.01	0.04
1J	71	-2.058	0.607	0.003	0.000	-0.000	-0.080	1	0.00	0.01	0.01
1K	71	-2.058	0.259	-0.004	0.000	0.001	0.242	1	0.00	0.01	0.04
1L	71	-2.058	0.607	-0.004	0.000	0.001	-0.080	1	0.00	0.01	0.01
1M	71	4.580	0.259	0.003	0.000	-0.000	0.242	1	0.00	0.02	0.04
1N	71	4.580	0.607	0.003	0.000	-0.000	-0.080	1	0.00	0.02	0.01
1O	71	4.580	0.259	-0.004	0.000	0.001	0.242	1	0.00	0.02	0.04
1P	71	4.580	0.607	-0.004	0.000	0.001	-0.080	1	0.00	0.02	0.01
2	71	2.266	0.824	-0.001	0.000	0.000	0.139	1	0.01	0.01	0.02
7	71	8.225	0.517	-0.003	0.000	0.001	0.005	1	0.00	0.03	0.00

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-1.495	0.001	0.222	1	0.1121	0.9980	0.9962	--	--	0.05	--	0.09	Snell. 'zx'= 245
1B	-1.495	0.001	-0.350	1	0.1121	0.9980	0.9980	--	--	0.05	--	0.11	Snell. 'zx'= 245
1C	-1.495	-0.001	0.222	1	0.1121	0.9662	0.9962	--	--	0.05	--	0.09	Snell. 'zx'= 245
1D	-1.495	-0.001	-0.350	1	0.1121	0.9662	0.9980	--	--	0.05	--	0.11	Snell. 'zx'= 245
1E	4.016	0.001	0.222	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	4.016	0.001	-0.350	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	4.016	-0.001	0.222	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	4.016	-0.001	-0.350	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-2.059	0.002	0.242	1	0.1121	1.0024	0.9947	--	--	0.08	--	0.12	Snell. 'zx'= 245
1J	-2.059	0.002	-0.337	1	0.1121	1.0024	0.9975	--	--	0.08	--	0.13	Snell. 'zx'= 245
1K	-2.059	-0.002	0.242	1	0.1121	0.9744	0.9947	--	--	0.08	--	0.12	Snell. 'zx'= 245
1L	-2.059	-0.002	-0.337	1	0.1121	0.9744	0.9975	--	--	0.08	--	0.13	Snell. 'zx'= 245
1M	4.580	0.002	0.242	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	4.580	0.002	-0.337	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	4.580	-0.002	0.242	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	4.580	-0.002	-0.337	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	2.266	-0.000	-0.469	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
7	8.225	-0.001	-0.386	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245

ASTA NUM. 54 NI 169 NF 148 Lugh. 114.9 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.98 3.48 4.65 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-6.899	0.504	0.428	0.000	0.946	2.194	1	0.00	0.01	0.13	
1B	0	-6.899	2.078	0.428	0.000	0.946	0.668	4	0.01	0.01	0.09	
1C	0	-6.899	0.504	-0.699	0.000	-0.691	2.194	4	0.01	0.01	0.26	
1D	0	-6.899	2.078	-0.699	0.000	-0.691	0.668	4	0.01	0.01	0.17	
1E	0	2.401	0.504	0.428	0.000	0.946	2.194	1	0.00	0.01	0.12	
1F	0	2.401	2.078	0.428	0.000	0.946	0.668	1	0.01	0.01	0.09	
1G	0	2.401	0.504	-0.699	0.000	-0.691	2.194	4	0.01	0.01	0.26	
1H	0	2.401	2.078	-0.699	0.000	-0.691	0.668	4	0.01	0.01	0.17	
1I	0	-8.131	0.831	0.976	0.000	1.883	1.985	1	0.01	0.01	0.19	
1J	0	-8.131	1.751	0.976	0.000	1.883	0.877	4	0.01	0.01	0.16	
1K	0	-8.131	0.831	-1.246	0.000	-1.628	1.985	4	0.01	0.01	0.41	
1L	0	-8.131	1.751	-1.246	0.000	-1.628	0.877	4	0.01	0.01	0.35	
1M	0	3.633	0.831	0.976	0.000	1.883	1.985	1	0.01	0.01	0.19	
1N	0	3.633	1.751	0.976	0.000	1.883	0.877	1	0.01	0.01	0.16	
1O	0	3.633	0.831	-1.246	0.000	-1.628	1.985	4	0.01	0.01	0.41	
1P	0	3.633	1.751	-1.246	0.000	-1.628	0.877	4	0.01	0.01	0.35	
2	0	-4.844	2.399	-0.256	0.000	0.241	2.664	1	0.01	0.01	0.09	
7	0	1.438	2.595	-0.805	0.000	0.486	2.610	1	0.01	0.00	0.10	
1A	57	-6.179	-0.767	0.428	0.000	0.802	1.776	1	0.00	0.01	0.11	

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1B	57	-6.179	0.806	0.428	0.000	0.802	1.839	1	0.00	0.01	0.11	
1C	57	-6.179	-0.767	-0.699	0.000	-0.391	1.776	4	0.01	0.01	0.18	
1D	57	-6.179	0.806	-0.699	0.000	-0.391	1.839	4	0.01	0.01	0.19	
1E	57	3.122	-0.767	0.428	0.000	0.802	1.776	1	0.00	0.01	0.10	
1F	57	3.122	0.806	0.428	0.000	0.802	1.839	1	0.00	0.01	0.11	
1G	57	3.122	-0.767	-0.699	0.000	-0.391	1.776	4	0.01	0.01	0.18	
1H	57	3.122	0.806	-0.699	0.000	-0.391	1.839	4	0.01	0.01	0.19	
1I	57	-7.411	-0.441	0.976	0.000	1.377	2.362	1	0.01	0.01	0.17	
1J	57	-7.411	0.480	0.976	0.000	1.377	1.253	1	0.01	0.01	0.14	
1K	57	-7.411	-0.441	-1.246	0.000	-0.966	2.362	4	0.01	0.01	0.32	
1L	57	-7.411	0.480	-1.246	0.000	-0.966	1.253	4	0.01	0.01	0.25	
1M	57	4.354	-0.441	0.976	0.000	1.377	2.362	1	0.01	0.01	0.16	
1N	57	4.354	0.480	0.976	0.000	1.377	1.253	1	0.01	0.01	0.14	
1O	57	4.354	-0.441	-1.246	0.000	-0.966	2.362	4	0.01	0.01	0.32	
1P	57	4.354	0.480	-1.246	0.000	-0.966	1.253	4	0.01	0.01	0.25	
2	57	-3.500	0.026	-0.256	0.000	0.388	3.361	1	0.00	0.00	0.11	
7	57	2.783	0.223	-0.805	0.000	0.948	3.419	1	0.01	0.01	0.15	
1A	115	-5.459	-2.039	0.428	0.000	0.657	0.628	4	0.01	0.01	0.08	
1B	115	-5.459	-0.465	0.428	0.000	0.657	2.280	1	0.00	0.01	0.11	
1C	115	-5.459	-2.039	-0.699	0.000	-0.091	0.628	4	0.01	0.01	0.06	
1D	115	-5.459	-0.465	-0.699	0.000	-0.091	2.280	4	0.01	0.01	0.16	
1E	115	3.842	-2.039	0.428	0.000	0.657	0.628	1	0.01	0.01	0.07	
1F	115	3.842	-0.465	0.428	0.000	0.657	2.280	1	0.00	0.01	0.11	
1G	115	3.842	-2.039	-0.699	0.000	-0.091	0.628	4	0.01	0.01	0.06	
1H	115	3.842	-0.465	-0.699	0.000	-0.091	2.280	4	0.01	0.01	0.16	
1I	115	-6.691	-1.712	0.976	0.000	0.870	2.009	1	0.01	0.01	0.12	
1J	115	-6.691	-0.792	0.976	0.000	0.870	0.899	4	0.01	0.01	0.10	
1K	115	-6.691	-1.712	-1.246	0.000	-0.305	2.009	4	0.01	0.01	0.18	
1L	115	-6.691	-0.792	-1.246	0.000	-0.305	0.899	4	0.01	0.01	0.11	
1M	115	5.074	-1.712	0.976	0.000	0.870	2.009	1	0.01	0.01	0.12	
1N	115	5.074	-0.792	0.976	0.000	0.870	0.899	1	0.01	0.01	0.09	
1O	115	5.074	-1.712	-1.246	0.000	-0.305	2.009	4	0.01	0.01	0.18	
1P	115	5.074	-0.792	-1.246	0.000	-0.305	0.899	4	0.01	0.01	0.12	
2	115	-2.155	-2.346	-0.256	0.000	0.535	2.694	1	0.01	0.00	0.10	
7	115	4.127	-2.150	-0.805	0.000	1.410	2.865	1	0.01	0.01	0.18	

#### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	-----	-----	-----										
	kN	kN*m											
1A	-6.899	0.946	2.194	4	0.5887	1.0190	1.0078	--	--	0.02	--	0.32	Snell.imin= 59
1B	-6.899	0.946	2.280	4	0.5887	1.0190	1.0079	--	--	0.02	--	0.33	Snell.imin= 59
1C	-6.899	-0.691	2.194	4	0.5887	1.0081	1.0078	--	--	0.02	--	0.27	Snell.imin= 59
1D	-6.899	-0.691	2.280	4	0.5887	1.0081	1.0079	--	--	0.02	--	0.28	Snell.imin= 59
1E	3.842	0.946	2.194	1	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1F	3.842	0.946	2.280	1	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1G	3.842	-0.691	2.194	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1H	3.842	-0.691	2.280	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1I	-8.131	1.883	2.362	1	0.5887	0.9920	1.0050	--	--	0.02	--	0.21	Snell.imin= 59
1J	-8.131	1.883	1.253	4	0.5887	1.0171	1.0146	--	--	0.02	--	0.43	Snell.imin= 59
1K	-8.131	-1.628	2.362	4	0.5887	1.0108	1.0161	--	--	0.02	--	0.46	Snell.imin= 59
1L	-8.131	-1.628	1.253	4	0.5887	1.0108	1.0146	--	--	0.02	--	0.39	Snell.imin= 59
1M	5.074	1.883	2.362	1	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1N	5.074	1.883	1.253	1	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1O	5.074	-1.628	2.362	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1P	5.074	-1.628	1.253	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
2	-4.844	0.535	3.361	1	0.5887	0.9951	1.0033	--	--	0.01	--	0.13	Snell.imin= 59
7	4.127	1.410	3.419	1	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59

ASTA NUM. 55 NI 148 NF 77 Lunghezza 114.9 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.98 3.48 4.65 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	-----	-----	-----	-----	-----	-----	-----					
	cm	kN			kN*m							
1A	0	-5.511	-1.910	0.827	0.000	0.647	2.281	1	0.01	0.01	0.11	
1B	0	-5.511	-0.592	0.827	0.000	0.647	0.627	4	0.01	0.01	0.07	
1C	0	-5.511	-1.910	-1.574	0.000	-0.147	2.281	4	0.01	0.01	0.17	
1D	0	-5.511	-0.592	-1.574	0.000	-0.147	0.627	4	0.01	0.01	0.07	
1E	0	3.779	-1.910	0.827	0.000	0.647	2.281	1	0.01	0.01	0.11	
1F	0	3.779	-0.592	0.827	0.000	0.647	0.627	1	0.01	0.01	0.07	
1G	0	3.779	-1.910	-1.574	0.000	-0.147	2.281	4	0.01	0.01	0.17	
1H	0	3.779	-0.592	-1.574	0.000	-0.147	0.627	4	0.01	0.01	0.07	
1I	0	-6.751	-1.784	2.123	0.000	0.898	2.009	1	0.02	0.01	0.12	
1J	0	-6.751	-0.718	2.123	0.000	0.898	0.899	4	0.02	0.01	0.11	
1K	0	-6.751	-1.784	-2.871	0.000	-0.397	2.009	4	0.02	0.01	0.20	
1L	0	-6.751	-0.718	-2.871	0.000	-0.397	0.899	4	0.02	0.01	0.13	
1M	0	5.019	-1.784	2.123	0.000	0.898	2.009	1	0.02	0.01	0.12	
1N	0	5.019	-0.718	2.123	0.000	0.898	0.899	1	0.02	0.01	0.09	
1O	0	5.019	-1.784	-2.871	0.000	-0.397	2.009	4	0.02	0.01	0.20	
1P	0	5.019	-0.718	-2.871	0.000	-0.397	0.899	4	0.02	0.01	0.13	
2	0	-2.271	-2.327	-0.656	0.000	0.476	2.695	1	0.01	0.00	0.10	
7	0	3.864	-2.124	-1.174	0.000	1.285	2.864	1	0.01	0.01	0.17	
1A	57	-4.790	-3.181	0.827	0.000	0.156	1.159	1	0.01	0.01	0.04	
1B	57	-4.790	-1.863	0.827	0.000	0.156	-0.419	3	0.01	0.01	0.05	
1C	57	-4.790	-3.181	-1.574	0.000	0.775	1.159	1	0.01	0.01	0.09	
1D	57	-4.790	-1.863	-1.574	0.000	0.775	-0.419	3	0.01	0.01	0.16	
1E	57	4.499	-3.181	0.827	0.000	0.156	1.159	1	0.01	0.01	0.04	
1F	57	4.499	-1.863	0.827	0.000	0.156	-0.419	3	0.01	0.01	0.05	
1G	57	4.499	-3.181	-1.574	0.000	0.775	1.159	1	0.01	0.01	0.09	
1H	57	4.499	-1.863	-1.574	0.000	0.775	-0.419	3	0.01	0.01	0.16	
1I	57	-6.031	-3.055	2.123	0.000	-0.345	0.408	4	0.02	0.01	0.09	



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1J	57	-6.031	-1.989	2.123	0.000	-0.345	0.332	4	0.02	0.01	0.09	
1K	57	-6.031	-3.055	-2.871	0.000	1.275	0.408	4	0.02	0.01	0.10	
1L	57	-6.031	-1.989	-2.871	0.000	1.275	0.332	4	0.02	0.01	0.09	
1M	57	5.740	-3.055	2.123	0.000	-0.345	0.408	4	0.02	0.01	0.09	
1N	57	5.740	-1.989	2.123	0.000	-0.345	0.332	4	0.02	0.01	0.09	
1O	57	5.740	-3.055	-2.871	0.000	1.275	0.408	3	0.02	0.01	0.25	
1P	57	5.740	-1.989	-2.871	0.000	1.275	0.332	3	0.02	0.01	0.25	
2	57	-0.926	-4.700	-0.656	0.000	0.853	0.676	1	0.02	0.00	0.08	
7	57	5.209	-4.497	-1.174	0.000	1.960	0.961	1	0.01	0.01	0.17	
1A	115	-4.070	-4.452	0.827	0.000	-0.336	-0.694	4	0.01	0.01	0.10	
1B	115	-4.070	-3.134	0.827	0.000	-0.336	-2.196	4	0.01	0.01	0.16	
1C	115	-4.070	-4.452	-1.574	0.000	1.696	-0.694	3	0.01	0.01	0.33	
1D	115	-4.070	-3.134	-1.574	0.000	1.696	-2.196	1	0.01	0.01	0.18	
1E	115	5.220	-4.452	0.827	0.000	-0.336	-0.694	4	0.01	0.01	0.09	
1F	115	5.220	-3.134	0.827	0.000	-0.336	-2.196	4	0.01	0.01	0.16	
1G	115	5.220	-4.452	-1.574	0.000	1.696	-0.694	3	0.01	0.01	0.33	
1H	115	5.220	-3.134	-1.574	0.000	1.696	-2.196	1	0.01	0.01	0.18	
1I	115	-5.311	-4.326	2.123	0.000	-1.587	-1.925	4	0.02	0.01	0.38	
1J	115	-5.311	-3.260	2.123	0.000	-1.587	-0.965	4	0.02	0.01	0.34	
1K	115	-5.311	-4.326	-2.871	0.000	2.947	-1.925	1	0.02	0.01	0.27	
1L	115	-5.311	-3.260	-2.871	0.000	2.947	-0.965	3	0.02	0.01	0.56	
1M	115	6.460	-4.326	2.123	0.000	-1.587	-1.925	4	0.02	0.01	0.37	
1N	115	6.460	-3.260	2.123	0.000	-1.587	-0.965	4	0.02	0.01	0.33	
1O	115	6.460	-4.326	-2.871	0.000	2.947	-1.925	3	0.02	0.01	0.61	
1P	115	6.460	-3.260	-2.871	0.000	2.947	-0.965	3	0.02	0.01	0.57	
2	115	0.418	-7.072	-0.656	0.000	1.230	-2.707	1	0.02	0.00	0.15	
7	115	6.553	-6.869	-1.174	0.000	2.634	-2.305	3	0.02	0.01	0.57	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\chi_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-5.511	0.647	2.281	4	0.5887	0.9964	1.0017	--	--	0.01	--	0.22	Snell.imin= 59
1B	-5.511	0.647	-2.196	4	0.5887	0.9964	1.0020	--	--	0.01	--	0.22	Snell.imin= 59
1C	-5.511	1.696	2.281	4	0.5887	1.0031	1.0017	--	--	0.01	--	0.41	Snell.imin= 59
1D	-5.511	1.696	-2.196	4	0.5887	1.0031	1.0020	--	--	0.01	--	0.40	Snell.imin= 59
1E	5.220	0.647	2.281	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1F	5.220	0.647	-2.196	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1G	5.220	1.696	2.281	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1H	5.220	1.696	-2.196	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1I	-6.751	-1.587	2.009	4	0.5887	0.9947	0.9953	--	--	0.02	--	0.38	Snell.imin= 59
1J	-6.751	-1.587	-0.965	4	0.5887	0.9947	0.9989	--	--	0.02	--	0.33	Snell.imin= 59
1K	-6.751	2.947	2.009	4	0.5887	1.0029	0.9953	--	--	0.02	--	0.62	Snell.imin= 59
1L	-6.751	2.947	-0.965	4	0.5887	1.0029	0.9989	--	--	0.02	--	0.57	Snell.imin= 59
1M	6.460	-1.587	2.009	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1N	6.460	-1.587	-0.965	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1O	6.460	2.947	2.009	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1P	6.460	2.947	-0.965	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
2	-2.271	1.230	-2.707	1	0.5887	0.9973	0.9964	--	--	0.01	--	0.16	Snell.imin= 59
7	6.553	2.634	2.864	3	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59

ASTA NUM. 56 NI 119 NF 118 Lungh. 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.97 3.44 4.59 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-8.920	1.202	0.495	0.000	0.702	1.412	1	0.00	0.01	0.10	
1B	0	-8.920	2.586	0.495	0.000	0.702	-0.408	3	0.01	0.01	0.15	
1C	0	-8.920	1.202	-0.327	0.000	-0.762	1.412	4	0.00	0.02	0.23	
1D	0	-8.920	2.586	-0.327	0.000	-0.762	-0.408	4	0.01	0.02	0.18	
1E	0	1.682	1.202	0.495	0.000	0.702	1.412	1	0.00	0.00	0.09	
1F	0	1.682	2.586	0.495	0.000	0.702	-0.408	3	0.01	0.00	0.14	
1G	0	1.682	1.202	-0.327	0.000	-0.762	1.412	4	0.00	0.00	0.22	
1H	0	1.682	2.586	-0.327	0.000	-0.762	-0.408	4	0.01	0.00	0.15	
1I	0	-11.699	1.325	0.765	0.000	1.666	1.452	4	0.01	0.02	0.18	
1J	0	-11.699	2.463	0.765	0.000	1.666	-0.448	3	0.01	0.02	0.33	
1K	0	-11.699	1.325	-0.597	0.000	-1.727	1.452	4	0.00	0.02	0.40	
1L	0	-11.699	2.463	-0.597	0.000	-1.727	-0.448	4	0.01	0.02	0.36	
1M	0	4.461	1.325	0.765	0.000	1.666	1.452	1	0.01	0.01	0.16	
1N	0	4.461	2.463	0.765	0.000	1.666	-0.448	3	0.01	0.01	0.32	
1O	0	4.461	1.325	-0.597	0.000	-1.727	1.452	4	0.00	0.01	0.40	
1P	0	4.461	2.463	-0.597	0.000	-1.727	-0.448	4	0.01	0.01	0.33	
2	0	-6.600	3.549	0.160	0.000	-0.057	0.679	4	0.01	0.01	0.06	
7	0	-17.950	4.169	0.039	0.000	-0.010	0.007	4	0.01	0.03	0.07	
1A	61	-8.127	-0.132	0.495	0.000	0.494	2.389	1	0.00	0.01	0.10	
1B	61	-8.127	1.251	0.495	0.000	0.494	0.113	4	0.00	0.01	0.05	
1C	61	-8.127	-0.132	-0.327	0.000	-0.658	2.389	4	0.00	0.01	0.27	
1D	61	-8.127	1.251	-0.327	0.000	-0.658	0.113	4	0.00	0.01	0.14	
1E	61	2.474	-0.132	0.495	0.000	0.494	2.389	1	0.00	0.01	0.10	
1F	61	2.474	1.251	0.495	0.000	0.494	0.113	3	0.00	0.01	0.09	
1G	61	2.474	-0.132	-0.327	0.000	-0.658	2.389	4	0.00	0.01	0.27	
1H	61	2.474	1.251	-0.327	0.000	-0.658	0.113	4	0.00	0.01	0.13	
1I	61	-10.907	-0.010	0.765	0.000	1.232	2.181	1	0.01	0.01	0.16	
1J	61	-10.907	1.128	0.765	0.000	1.232	0.321	4	0.01	0.02	0.09	
1K	61	-10.907	-0.010	-0.597	0.000	-1.396	2.181	4	0.00	0.02	0.39	
1L	61	-10.907	1.128	-0.597	0.000	-1.396	0.321	4	0.00	0.02	0.27	
1M	61	5.254	-0.010	0.765	0.000	1.232	2.181	1	0.01	0.01	0.15	
1N	61	5.254	1.128	0.765	0.000	1.232	0.321	3	0.01	0.01	0.24	
1O	61	5.254	-0.010	-0.597	0.000	-1.396	2.181	4	0.00	0.01	0.39	
1P	61	5.254	1.128	-0.597	0.000	-1.396	0.321	4	0.00	0.01	0.27	
2	61	-5.121	1.058	0.160	0.000	-0.154	2.085	4	0.00	0.01	0.16	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

7	61	-16.475	1.678	0.039	0.000	-0.033	1.792	4	0.01	0.03	0.13
1A	122	-7.335	-1.467	0.495	0.000	0.286	2.551	1	0.00	0.01	0.09
1B	122	-7.335	-0.084	0.495	0.000	0.286	-0.181	3	0.00	0.01	0.07
1C	122	-7.335	-1.467	-0.327	0.000	-0.553	2.551	4	0.00	0.01	0.26
1D	122	-7.335	-0.084	-0.327	0.000	-0.553	-0.181	4	0.00	0.01	0.13
1E	122	3.267	-1.467	0.495	0.000	0.286	2.551	1	0.00	0.01	0.08
1F	122	3.267	-0.084	0.495	0.000	0.286	-0.181	3	0.00	0.01	0.06
1G	122	3.267	-1.467	-0.327	0.000	-0.553	2.551	4	0.00	0.01	0.26
1H	122	3.267	-0.084	-0.327	0.000	-0.553	-0.181	4	0.00	0.01	0.11
1I	122	-10.114	-1.344	0.765	0.000	0.798	2.095	1	0.01	0.01	0.12
1J	122	-10.114	-0.206	0.765	0.000	0.798	0.275	4	0.01	0.02	0.06
1K	122	-10.114	-1.344	-0.597	0.000	-1.064	2.095	4	0.00	0.02	0.32
1L	122	-10.114	-0.206	-0.597	0.000	-1.064	0.275	4	0.00	0.02	0.21
1M	122	6.046	-1.344	0.765	0.000	0.798	2.095	1	0.01	0.01	0.12
1N	122	6.046	-0.206	0.765	0.000	0.798	0.275	3	0.01	0.01	0.16
1O	122	6.046	-1.344	-0.597	0.000	-1.064	2.095	4	0.00	0.01	0.32
1P	122	6.046	-0.206	-0.597	0.000	-1.064	0.275	4	0.00	0.01	0.21
2	122	-3.642	-1.433	0.160	0.000	-0.252	1.971	4	0.00	0.01	0.17
7	122	-15.000	-0.813	0.039	0.000	-0.057	2.056	4	0.00	0.03	0.15

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-8.920	0.702	2.551	1	0.5729	0.9901	1.0010	--	--	0.02	--	0.13	Snell.imin= 63
1B	-8.920	0.702	-0.408	4	0.6029	1.0210	1.0173	--	--	0.03	--	0.19	Snell.imin= 63
1C	-8.920	-0.762	2.551	4	0.6029	1.0306	1.0160	--	--	0.03	--	0.31	Snell.imin= 63
1D	-8.920	-0.762	-0.408	4	0.6029	1.0306	1.0173	--	--	0.03	--	0.21	Snell.imin= 63
1E	3.267	0.702	2.551	1	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1F	3.267	0.702	-0.408	3	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1G	3.267	-0.762	2.551	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1H	3.267	-0.762	-0.408	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1I	-11.699	1.666	2.181	4	0.6029	1.0303	1.0233	--	--	0.03	--	0.45	Snell.imin= 63
1J	-11.699	1.666	-0.448	4	0.6029	1.0303	1.0210	--	--	0.03	--	0.38	Snell.imin= 63
1K	-11.699	-1.727	2.181	4	0.6029	1.0358	1.0233	--	--	0.03	--	0.47	Snell.imin= 63
1L	-11.699	-1.727	-0.448	4	0.6029	1.0358	1.0210	--	--	0.03	--	0.40	Snell.imin= 63
1M	6.046	1.666	2.181	1	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1N	6.046	1.666	-0.448	3	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1O	6.046	-1.727	2.181	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1P	6.046	-1.727	-0.448	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
2	-6.600	-0.252	2.085	4	0.6029	1.0115	1.0100	--	--	0.02	--	0.19	Snell.imin= 63
7	-17.950	-0.057	2.056	4	0.6029	1.0278	1.0190	--	--	0.05	--	0.17	Snell.imin= 63

ASTA NUM. 57 NI 118 NF 33 Lungh. 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.97 3.44 4.59 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-6.936	-1.859	0.876	0.000	0.307	2.550	1	0.01	0.01	0.09	
1B	0	-6.936	0.263	0.876	0.000	0.307	-0.182	3	0.01	0.01	0.07	
1C	0	-6.936	-1.859	-1.134	0.000	-0.565	2.550	4	0.01	0.01	0.26	
1D	0	-6.936	0.263	-1.134	0.000	-0.565	-0.182	4	0.01	0.01	0.13	
1E	0	2.918	-1.859	0.876	0.000	0.307	2.550	1	0.01	0.01	0.09	
1F	0	2.918	0.263	0.876	0.000	0.307	-0.182	3	0.01	0.01	0.07	
1G	0	2.918	-1.859	-1.134	0.000	-0.565	2.550	4	0.01	0.01	0.26	
1H	0	2.918	0.263	-1.134	0.000	-0.565	-0.182	4	0.01	0.01	0.11	
1I	0	-9.769	-1.547	2.279	0.000	0.854	2.094	1	0.02	0.01	0.12	
1J	0	-9.769	-0.049	2.279	0.000	0.854	0.274	4	0.02	0.02	0.06	
1K	0	-9.769	-1.547	-2.537	0.000	-1.112	2.094	4	0.02	0.02	0.33	
1L	0	-9.769	-0.049	-2.537	0.000	-1.112	0.274	4	0.02	0.02	0.22	
1M	0	5.751	-1.547	2.279	0.000	0.854	2.094	1	0.02	0.01	0.12	
1N	0	5.751	-0.049	2.279	0.000	0.854	0.274	3	0.02	0.01	0.17	
1O	0	5.751	-1.547	-2.537	0.000	-1.112	2.094	4	0.02	0.01	0.33	
1P	0	5.751	-0.049	-2.537	0.000	-1.112	0.274	4	0.02	0.01	0.22	
2	0	-3.605	-1.459	-0.247	0.000	-0.244	1.971	4	0.00	0.01	0.17	
7	0	-14.970	-0.842	-0.018	0.000	-0.054	2.052	4	0.00	0.03	0.15	
1A	61	-6.144	-3.194	0.876	0.000	-0.253	1.156	4	0.01	0.01	0.12	
1B	61	-6.144	-1.072	0.876	0.000	-0.253	-0.577	4	0.01	0.01	0.09	
1C	61	-6.144	-3.194	-1.134	0.000	0.152	1.156	1	0.01	0.01	0.05	
1D	61	-6.144	-1.072	-1.134	0.000	0.152	-0.577	3	0.01	0.01	0.06	
1E	61	3.710	-3.194	0.876	0.000	-0.253	1.156	4	0.01	0.01	0.12	
1F	61	3.710	-1.072	0.876	0.000	-0.253	-0.577	4	0.01	0.01	0.07	
1G	61	3.710	-3.194	-1.134	0.000	0.152	1.156	1	0.01	0.01	0.04	
1H	61	3.710	-1.072	-1.134	0.000	0.152	-0.577	3	0.01	0.01	0.06	
1I	61	-8.976	-2.882	2.279	0.000	-0.546	0.609	4	0.02	0.02	0.14	
1J	61	-8.976	-1.383	2.279	0.000	-0.546	-0.030	4	0.02	0.02	0.13	
1K	61	-8.976	-2.882	-2.537	0.000	0.445	0.609	4	0.02	0.02	0.06	
1L	61	-8.976	-1.383	-2.537	0.000	0.445	-0.030	4	0.02	0.02	0.05	
1M	61	6.543	-2.882	2.279	0.000	-0.546	0.609	4	0.02	0.01	0.14	
1N	61	6.543	-1.383	2.279	0.000	-0.546	-0.030	4	0.02	0.01	0.11	
1O	61	6.543	-2.882	-2.537	0.000	0.445	0.609	4	0.02	0.01	0.07	
1P	61	6.543	-1.383	-2.537	0.000	0.445	-0.030	1	0.02	0.01	0.04	
2	61	-2.126	-3.950	-0.247	0.000	-0.094	0.319	4	0.01	0.00	0.04	
7	61	-13.490	-3.333	-0.018	0.000	-0.043	0.777	4	0.01	0.02	0.07	
1A	122	-5.351	-4.528	0.876	0.000	-0.812	-1.053	4	0.01	0.01	0.20	
1B	122	-5.351	-2.406	0.876	0.000	-0.812	-1.787	4	0.01	0.01	0.23	
1C	122	-5.351	-4.528	-1.134	0.000	0.869	-1.053	3	0.01	0.01	0.20	
1D	122	-5.351	-2.406	-1.134	0.000	0.869	-1.787	3	0.01	0.01	0.23	
1E	122	4.503	-4.528	0.876	0.000	-0.812	-1.053	4	0.01	0.01	0.19	
1F	122	4.503	-2.406	0.876	0.000	-0.812	-1.787	4	0.01	0.01	0.22	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1G	122	4.503	-4.528	-1.134	0.000	0.869	-1.053	3	0.01	0.01	0.20	
1H	122	4.503	-2.406	-1.134	0.000	0.869	-1.787	1	0.01	0.01	0.11	
1I	122	-8.184	-4.216	2.279	0.000	-1.946	-1.691	4	0.02	0.01	0.44	
1J	122	-8.184	-2.718	2.279	0.000	-1.946	-1.149	4	0.02	0.01	0.42	
1K	122	-8.184	-4.216	-2.537	0.000	2.002	-1.691	3	0.02	0.01	0.43	
1L	122	-8.184	-2.718	-2.537	0.000	2.002	-1.149	3	0.02	0.01	0.41	
1M	122	7.335	-4.216	2.279	0.000	-1.946	-1.691	4	0.02	0.02	0.42	
1N	122	7.335	-2.718	2.279	0.000	-1.946	-1.149	4	0.02	0.02	0.40	
1O	122	7.335	-4.216	-2.537	0.000	2.002	-1.691	3	0.02	0.02	0.43	
1P	122	7.335	-2.718	-2.537	0.000	2.002	-1.149	3	0.02	0.02	0.41	
2	122	-0.648	-6.441	-0.247	0.000	0.057	-2.853	1	0.02	0.00	0.07	
7	122	-12.010	-5.824	-0.018	0.000	-0.033	-2.018	4	0.02	0.02	0.13	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\chi_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-6.936	-0.812	2.550	4	0.6029	0.9978	1.0012	--	--	0.02	--	0.26	Snell.imin= 63
1B	-6.936	-0.812	-1.787	4	0.6029	0.9978	1.0086	--	--	0.02	--	0.25	Snell.imin= 63
1C	-6.936	0.869	2.550	4	0.6029	0.9914	1.0012	--	--	0.02	--	0.27	Snell.imin= 63
1D	-6.936	0.869	-1.787	4	0.6029	0.9914	1.0086	--	--	0.02	--	0.25	Snell.imin= 63
1E	4.503	-0.812	2.550	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1F	4.503	-0.812	-1.787	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1G	4.503	0.869	2.550	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1H	4.503	0.869	-1.787	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1I	-9.769	-1.946	2.094	4	0.6029	0.9949	0.9949	--	--	0.03	--	0.45	Snell.imin= 63
1J	-9.769	-1.946	-1.149	4	0.6029	0.9949	1.0100	--	--	0.03	--	0.43	Snell.imin= 63
1K	-9.769	2.002	2.094	4	0.6029	0.9911	0.9949	--	--	0.03	--	0.45	Snell.imin= 63
1L	-9.769	2.002	-1.149	4	0.6029	0.9911	1.0100	--	--	0.03	--	0.43	Snell.imin= 63
1M	7.335	-1.946	2.094	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1N	7.335	-1.946	-1.149	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1O	7.335	2.002	2.094	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1P	7.335	2.002	-1.149	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
2	-3.605	-0.244	-2.853	4	0.6029	1.0006	0.9984	--	--	0.01	--	0.18	Snell.imin= 63
7	-14.970	-0.054	2.052	4	0.6029	1.0450	0.9871	--	--	0.04	--	0.13	Snell.imin= 63

**ASTA NUM. 58** NI 152 NF 131 Lugh. 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.97 1.72 2.87 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-4.654	0.708	0.454	0.000	0.414	2.599	1	0.00	0.01	0.10	
1B	0	-4.654	1.512	0.454	0.000	0.414	0.611	4	0.01	0.01	0.06	
1C	0	-4.654	0.708	-0.491	0.000	-0.421	2.599	4	0.00	0.01	0.24	
1D	0	-4.654	1.512	-0.491	0.000	-0.421	0.611	4	0.01	0.01	0.11	
1E	0	3.326	0.708	0.454	0.000	0.414	2.599	1	0.00	0.01	0.10	
1F	0	3.326	1.512	0.454	0.000	0.414	0.611	1	0.01	0.01	0.05	
1G	0	3.326	0.708	-0.491	0.000	-0.421	2.599	4	0.00	0.01	0.24	
1H	0	3.326	1.512	-0.491	0.000	-0.421	0.611	4	0.01	0.01	0.12	
1I	0	-6.645	0.635	0.513	0.000	0.564	2.145	1	0.00	0.01	0.10	
1J	0	-6.645	1.585	0.513	0.000	0.564	1.065	1	0.01	0.01	0.07	
1K	0	-6.645	0.635	-0.550	0.000	-0.571	2.145	4	0.00	0.01	0.24	
1L	0	-6.645	1.585	-0.550	0.000	-0.571	1.065	4	0.01	0.01	0.17	
1M	0	5.317	0.635	0.513	0.000	0.564	2.145	1	0.00	0.01	0.10	
1N	0	5.317	1.585	0.513	0.000	0.564	1.065	1	0.01	0.01	0.07	
1O	0	5.317	0.635	-0.550	0.000	-0.571	2.145	4	0.00	0.01	0.24	
1P	0	5.317	1.585	-0.550	0.000	-0.571	1.065	4	0.01	0.01	0.17	
2	0	-1.136	2.186	-0.040	0.000	-0.010	2.717	4	0.01	0.00	0.17	
7	0	0.903	0.121	0.909	0.000	0.544	1.090	1	0.01	0.00	0.07	
1A	61	-3.862	-0.627	0.454	0.000	-0.029	2.912	4	0.00	0.01	0.19	
1B	61	-3.862	0.178	0.454	0.000	-0.029	0.839	4	0.00	0.01	0.06	
1C	61	-3.862	-0.627	-0.491	0.000	0.045	2.912	1	0.00	0.01	0.08	
1D	61	-3.862	0.178	-0.491	0.000	0.045	0.839	1	0.00	0.01	0.03	
1E	61	4.119	-0.627	0.454	0.000	-0.029	2.912	1	0.00	0.01	0.08	
1F	61	4.119	0.178	0.454	0.000	-0.029	0.839	1	0.00	0.01	0.03	
1G	61	4.119	-0.627	-0.491	0.000	0.045	2.912	1	0.00	0.01	0.08	
1H	61	4.119	0.178	-0.491	0.000	0.045	0.839	1	0.00	0.01	0.03	
1I	61	-5.852	-0.699	0.513	0.000	-0.019	2.455	4	0.00	0.01	0.16	
1J	61	-5.852	0.250	0.513	0.000	-0.019	1.296	4	0.00	0.01	0.09	
1K	61	-5.852	-0.699	-0.550	0.000	0.035	2.455	4	0.00	0.01	0.15	
1L	61	-5.852	0.250	-0.550	0.000	0.035	1.296	4	0.00	0.01	0.08	
1M	61	6.109	-0.699	0.513	0.000	-0.019	2.455	1	0.00	0.01	0.07	
1N	61	6.109	0.250	0.513	0.000	-0.019	1.296	1	0.00	0.01	0.04	
1O	61	6.109	-0.699	-0.550	0.000	0.035	2.455	1	0.00	0.01	0.07	
1P	61	6.109	0.250	-0.550	0.000	0.035	1.296	1	0.00	0.01	0.04	
2	61	0.343	-0.305	-0.040	0.000	0.014	3.291	1	0.00	0.00	0.08	
7	61	1.447	-0.795	0.909	0.000	-0.011	0.885	4	0.01	0.00	0.06	
1A	122	-3.069	-1.961	0.454	0.000	-0.472	2.410	4	0.01	0.01	0.23	
1B	122	-3.069	-1.157	0.454	0.000	-0.472	0.252	4	0.00	0.01	0.10	
1C	122	-3.069	-1.961	-0.491	0.000	0.511	2.410	1	0.01	0.00	0.10	
1D	122	-3.069	-1.157	-0.491	0.000	0.511	0.252	4	0.00	0.01	0.04	
1E	122	4.911	-1.961	0.454	0.000	-0.472	2.410	4	0.01	0.01	0.24	
1F	122	4.911	-1.157	0.454	0.000	-0.472	0.252	4	0.00	0.01	0.11	
1G	122	4.911	-1.961	-0.491	0.000	0.511	2.410	1	0.01	0.01	0.10	
1H	122	4.911	-1.157	-0.491	0.000	0.511	0.252	3	0.00	0.01	0.11	
1I	122	-5.060	-2.034	0.513	0.000	-0.602	1.950	4	0.01	0.01	0.23	
1J	122	-5.060	-1.084	0.513	0.000	-0.602	0.712	4	0.00	0.01	0.15	
1K	122	-5.060	-2.034	-0.550	0.000	0.640	1.950	1	0.01	0.01	0.10	
1L	122	-5.060	-1.084	-0.550	0.000	0.640	0.712	4	0.00	0.01	0.08	
1M	122	6.902	-2.034	0.513	0.000	-0.602	1.950	4	0.01	0.02	0.24	
1N	122	6.902	-1.084	0.513	0.000	-0.602	0.712	4	0.00	0.02	0.16	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

10	122	6.902	-2.034	-0.550	0.000	0.640	1.950	1	0.01	0.02	0.10
1P	122	6.902	-1.084	-0.550	0.000	0.640	0.712	4	0.00	0.02	0.09
2	122	1.822	-2.797	-0.040	0.000	0.039	2.344	1	0.01	0.00	0.06
7	122	1.991	-1.711	0.909	0.000	-0.567	0.120	4	0.01	0.00	0.11

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN					kN*m							
1A	-4.654	-0.472	2.912	4	0.5729	0.9918	1.0092	--	--	0.01	--	0.27	Snell.imin= 63
1B	-4.654	-0.472	0.839	4	0.5729	0.9918	1.0069	--	--	0.01	--	0.15	Snell.imin= 63
1C	-4.654	0.511	2.912	4	0.5729	0.9925	1.0092	--	--	0.01	--	0.28	Snell.imin= 63
1D	-4.654	0.511	0.839	4	0.5729	0.9925	1.0069	--	--	0.01	--	0.15	Snell.imin= 63
1E	4.911	-0.472	2.912	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1F	4.911	-0.472	0.839	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1G	4.911	0.511	2.912	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1H	4.911	0.511	0.839	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1I	-6.645	-0.602	2.455	4	0.5729	0.9871	1.0128	--	--	0.02	--	0.27	Snell.imin= 63
1J	-6.645	-0.602	1.296	4	0.5729	0.9871	1.0105	--	--	0.02	--	0.20	Snell.imin= 63
1K	-6.645	0.640	2.455	4	0.5729	0.9880	1.0128	--	--	0.02	--	0.28	Snell.imin= 63
1L	-6.645	0.640	1.296	4	0.5729	0.9880	1.0105	--	--	0.02	--	0.21	Snell.imin= 63
1M	6.902	-0.602	2.455	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1N	6.902	-0.602	1.296	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1O	6.902	0.640	2.455	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1P	6.902	0.640	1.296	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
2	-1.136	0.039	3.291	4	0.5729	1.0001	1.0022	--	--	0.00	--	0.21	Snell.imin= 63
7	1.991	-0.567	1.090	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63

**ASTA NUM. 59** NI 131 NF 151 Lungh. 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.97 1.72 2.87 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-2.889	-2.408	0.489	0.000	0.494	2.412	1	0.01	0.00	0.10	
1B	0	-2.889	-0.740	0.489	0.000	0.494	0.254	4	0.00	0.00	0.04	
1C	0	-2.889	-2.408	-1.123	0.000	-0.480	2.412	4	0.01	0.00	0.24	
1D	0	-2.889	-0.740	-1.123	0.000	-0.480	0.254	4	0.01	0.00	0.10	
1E	0	4.704	-2.408	0.489	0.000	0.494	2.412	1	0.01	0.01	0.10	
1F	0	4.704	-0.740	0.489	0.000	0.494	0.254	3	0.00	0.01	0.10	
1G	0	4.704	-2.408	-1.123	0.000	-0.480	2.412	4	0.01	0.01	0.24	
1H	0	4.704	-0.740	-1.123	0.000	-0.480	0.254	4	0.01	0.01	0.11	
1I	0	-4.938	-2.153	0.828	0.000	0.628	1.951	1	0.01	0.01	0.10	
1J	0	-4.938	-0.995	0.828	0.000	0.628	0.715	4	0.01	0.01	0.08	
1K	0	-4.938	-2.153	-1.462	0.000	-0.614	1.951	4	0.01	0.01	0.23	
1L	0	-4.938	-0.995	-1.462	0.000	-0.614	0.715	4	0.01	0.01	0.16	
1M	0	6.753	-2.153	0.828	0.000	0.628	1.951	1	0.01	0.01	0.10	
1N	0	6.753	-0.995	0.828	0.000	0.628	0.715	4	0.01	0.01	0.09	
1O	0	6.753	-2.153	-1.462	0.000	-0.614	1.951	4	0.01	0.01	0.24	
1P	0	6.753	-0.995	-1.462	0.000	-0.614	0.715	4	0.01	0.01	0.16	
2	0	1.785	-2.807	-0.600	0.000	0.015	2.348	1	0.01	0.00	0.06	
7	0	2.143	-1.770	0.428	0.000	-0.507	0.126	4	0.01	0.00	0.10	
1A	61	-2.097	-3.743	0.489	0.000	0.091	0.819	1	0.01	0.00	0.03	
1B	61	-2.097	-2.075	0.489	0.000	0.091	-0.890	1	0.01	0.00	0.03	
1C	61	-2.097	-3.743	-1.123	0.000	0.310	0.819	1	0.01	0.00	0.04	
1D	61	-2.097	-2.075	-1.123	0.000	0.310	-0.890	1	0.01	0.00	0.05	
1E	61	5.496	-3.743	0.489	0.000	0.091	0.819	4	0.01	0.01	0.06	
1F	61	5.496	-2.075	0.489	0.000	0.091	-0.890	3	0.01	0.01	0.06	
1G	61	5.496	-3.743	-1.123	0.000	0.310	0.819	4	0.01	0.01	0.08	
1H	61	5.496	-2.075	-1.123	0.000	0.310	-0.890	3	0.01	0.01	0.10	
1I	61	-4.146	-3.488	0.828	0.000	0.006	0.637	4	0.01	0.01	0.04	
1J	61	-4.146	-2.330	0.828	0.000	0.006	-0.709	4	0.01	0.01	0.04	
1K	61	-4.146	-3.488	-1.462	0.000	0.395	0.637	1	0.01	0.01	0.05	
1L	61	-4.146	-2.330	-1.462	0.000	0.395	-0.709	3	0.01	0.01	0.10	
1M	61	7.545	-3.488	0.828	0.000	0.006	0.637	4	0.01	0.02	0.05	
1N	61	7.545	-2.330	0.828	0.000	0.006	-0.709	3	0.01	0.02	0.04	
1O	61	7.545	-3.488	-1.462	0.000	0.395	0.637	4	0.01	0.02	0.07	
1P	61	7.545	-2.330	-1.462	0.000	0.395	-0.709	3	0.01	0.02	0.11	
2	61	3.264	-5.298	-0.600	0.000	0.381	-0.127	3	0.02	0.01	0.08	
7	61	2.687	-2.686	0.428	0.000	-0.768	-1.234	4	0.01	0.01	0.19	
1A	122	-1.305	-5.078	0.489	0.000	-0.312	-1.589	4	0.02	0.00	0.12	
1B	122	-1.305	-3.410	0.489	0.000	-0.312	-2.849	4	0.01	0.00	0.18	
1C	122	-1.305	-5.078	-1.123	0.000	1.100	-1.589	1	0.02	0.00	0.12	
1D	122	-1.305	-3.410	-1.123	0.000	1.100	-2.849	1	0.01	0.00	0.15	
1E	122	6.289	-5.078	0.489	0.000	-0.312	-1.589	4	0.02	0.01	0.13	
1F	122	6.289	-3.410	0.489	0.000	-0.312	-2.849	4	0.01	0.01	0.18	
1G	122	6.289	-5.078	-1.123	0.000	1.100	-1.589	3	0.02	0.01	0.27	
1H	122	6.289	-3.410	-1.123	0.000	1.100	-2.849	1	0.01	0.01	0.16	
1I	122	-3.354	-4.823	0.828	0.000	-0.616	-1.491	4	0.02	0.01	0.18	
1J	122	-3.354	-3.665	0.828	0.000	-0.616	-2.947	4	0.01	0.01	0.24	
1K	122	-3.354	-4.823	-1.462	0.000	1.404	-1.491	1	0.02	0.00	0.14	
1L	122	-3.354	-3.665	-1.462	0.000	1.404	-2.947	1	0.01	0.00	0.18	
1M	122	8.337	-4.823	0.828	0.000	-0.616	-1.491	4	0.02	0.02	0.18	
1N	122	8.337	-3.665	0.828	0.000	-0.616	-2.947	4	0.01	0.02	0.24	
1O	122	8.337	-4.823	-1.462	0.000	1.404	-1.491	3	0.02	0.02	0.32	
1P	122	8.337	-3.665	-1.462	0.000	1.404	-2.947	3	0.01	0.02	0.38	
2	122	4.743	-7.789	-0.600	0.000	0.747	-4.122	1	0.03	0.01	0.16	
7	122	3.231	-3.602	0.428	0.000	-1.030	-3.153	4	0.01	0.01	0.32	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-2.889	0.494	2.412	4	0.5729	0.9970	0.9993	--	--	0.01	--	0.19	Snell.imin= 63
1B	-2.889	0.494	-2.849	4	0.5729	0.9970	1.0018	--	--	0.01	--	0.21	Snell.imin= 63
1C	-2.889	1.100	2.412	4	0.5729	0.9987	0.9993	--	--	0.01	--	0.30	Snell.imin= 63
1D	-2.889	1.100	-2.849	4	0.5729	0.9987	1.0018	--	--	0.01	--	0.32	Snell.imin= 63
1E	6.289	0.494	2.412	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1F	6.289	0.494	-2.849	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1G	6.289	1.100	2.412	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1H	6.289	1.100	-2.849	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1I	-4.938	0.628	1.951	4	0.5729	0.9900	0.9984	--	--	0.01	--	0.20	Snell.imin= 63
1J	-4.938	0.628	-2.947	4	0.5729	0.9900	1.0019	--	--	0.01	--	0.24	Snell.imin= 63
1K	-4.938	1.404	1.951	4	0.5729	0.9978	0.9984	--	--	0.01	--	0.34	Snell.imin= 63
1L	-4.938	1.404	-2.947	4	0.5729	0.9978	1.0019	--	--	0.01	--	0.38	Snell.imin= 63
1M	8.337	0.628	1.951	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1N	8.337	0.628	-2.947	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1O	8.337	1.404	1.951	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1P	8.337	1.404	-2.947	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
2	4.743	0.747	-4.122	3	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
7	3.231	-1.030	-3.153	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63

**ASTA NUM. 60** NI 1 NF 149 Lungh. 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.97 3.44 4.59 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-19.234	2.890	0.671	0.000	0.031	-1.779	4	0.01	0.03	0.13	
1B	0	-19.234	5.234	0.671	0.000	0.031	-3.831	4	0.02	0.03	0.21	
1C	0	-19.234	2.890	-0.572	0.000	-0.018	-1.779	4	0.01	0.03	0.14	
1D	0	-19.234	5.234	-0.572	0.000	-0.018	-3.831	4	0.02	0.03	0.23	
1E	0	-2.626	2.890	0.671	0.000	0.031	-1.779	1	0.01	0.00	0.05	
1F	0	-2.626	5.234	0.671	0.000	0.031	-3.831	1	0.02	0.00	0.10	
1G	0	-2.626	2.890	-0.572	0.000	-0.018	-1.779	4	0.01	0.00	0.09	
1H	0	-2.626	5.234	-0.572	0.000	-0.018	-3.831	4	0.02	0.00	0.17	
1I	0	-20.842	3.518	1.505	0.000	0.069	-1.692	4	0.01	0.04	0.13	
1J	0	-20.842	4.606	1.505	0.000	0.069	-3.918	4	0.02	0.04	0.22	
1K	0	-20.842	3.518	-1.407	0.000	-0.056	-1.692	4	0.01	0.04	0.15	
1L	0	-20.842	4.606	-1.407	0.000	-0.056	-3.918	4	0.02	0.04	0.24	
1M	0	-1.018	3.518	1.505	0.000	0.069	-1.692	1	0.01	0.00	0.05	
1N	0	-1.018	4.606	1.505	0.000	0.069	-3.918	1	0.02	0.00	0.10	
1O	0	-1.018	3.518	-1.407	0.000	-0.056	-1.692	4	0.01	0.00	0.08	
1P	0	-1.018	4.606	-1.407	0.000	-0.056	-3.918	4	0.02	0.00	0.18	
2	0	-20.930	7.624	0.093	0.000	0.012	-5.559	4	0.03	0.04	0.29	
7	0	-8.828	7.027	0.030	0.000	0.012	-3.920	4	0.02	0.02	0.19	

1A	61	-18.440	1.555	0.671	0.000	-0.379	-0.885	4	0.01	0.03	0.17	
1B	61	-18.440	3.899	0.671	0.000	-0.379	-0.580	4	0.01	0.03	0.15	
1C	61	-18.440	1.555	-0.572	0.000	0.332	-0.885	3	0.01	0.02	0.12	
1D	61	-18.440	3.899	-0.572	0.000	0.332	-0.580	3	0.01	0.02	0.11	
1E	61	-1.832	1.555	0.671	0.000	-0.379	-0.885	4	0.01	0.00	0.11	
1F	61	-1.832	3.899	0.671	0.000	-0.379	-0.580	4	0.01	0.00	0.10	
1G	61	-1.832	1.555	-0.572	0.000	0.332	-0.885	1	0.01	0.00	0.05	
1H	61	-1.832	3.899	-0.572	0.000	0.332	-0.580	3	0.01	0.00	0.08	
1I	61	-20.048	2.183	1.505	0.000	-0.850	0.394	4	0.01	0.03	0.20	
1J	61	-20.048	3.271	1.505	0.000	-0.850	-1.859	4	0.01	0.03	0.29	
1K	61	-20.048	2.183	-1.407	0.000	0.803	0.394	4	0.01	0.03	0.08	
1L	61	-20.048	3.271	-1.407	0.000	0.803	-1.859	3	0.01	0.03	0.25	
1M	61	-0.224	2.183	1.505	0.000	-0.850	0.394	4	0.01	0.00	0.17	
1N	61	-0.224	3.271	1.505	0.000	-0.850	-1.859	4	0.01	0.00	0.23	
1O	61	-0.224	2.183	-1.407	0.000	0.803	0.394	1	0.01	0.00	0.07	
1P	61	-0.224	3.271	-1.407	0.000	0.803	-1.859	1	0.01	0.00	0.10	
2	61	-19.455	5.133	0.093	0.000	-0.045	-1.665	4	0.02	0.03	0.14	
7	61	-7.350	4.536	0.030	0.000	-0.006	-0.390	4	0.01	0.01	0.04	

1A	122	-17.646	0.220	0.671	0.000	-0.789	-0.806	4	0.00	0.03	0.23	
1B	122	-17.646	2.564	0.671	0.000	-0.789	1.856	4	0.01	0.03	0.27	
1C	122	-17.646	0.220	-0.572	0.000	0.682	-0.806	3	0.00	0.02	0.18	
1D	122	-17.646	2.564	-0.572	0.000	0.682	1.856	4	0.01	0.03	0.15	
1E	122	-1.038	0.220	0.671	0.000	-0.789	-0.806	4	0.00	0.00	0.18	
1F	122	-1.038	2.564	0.671	0.000	-0.789	1.856	4	0.01	0.00	0.25	
1G	122	-1.038	0.220	-0.572	0.000	0.682	-0.806	1	0.00	0.00	0.07	
1H	122	-1.038	2.564	-0.572	0.000	0.682	1.856	1	0.01	0.00	0.09	
1I	122	-19.254	0.848	1.505	0.000	-1.769	1.665	4	0.01	0.03	0.43	
1J	122	-19.254	1.936	1.505	0.000	-1.769	-0.615	4	0.01	0.03	0.40	
1K	122	-19.254	0.848	-1.407	0.000	1.662	1.665	4	0.01	0.03	0.19	
1L	122	-19.254	1.936	-1.407	0.000	1.662	-0.615	3	0.01	0.03	0.34	
1M	122	0.570	0.848	1.505	0.000	-1.769	1.665	4	0.01	0.00	0.41	
1N	122	0.570	1.936	1.505	0.000	-1.769	-0.615	4	0.01	0.00	0.34	
1O	122	0.570	0.848	-1.407	0.000	1.662	1.665	1	0.01	0.00	0.16	
1P	122	0.570	1.936	-1.407	0.000	1.662	-0.615	1	0.01	0.00	0.14	
2	122	-17.980	2.642	0.093	0.000	-0.101	0.709	4	0.01	0.03	0.07	
7	122	-5.871	2.045	0.030	0.000	-0.024	1.619	4	0.01	0.01	0.11	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-19.234	-0.789	-1.779	4	0.6029	1.0161	1.0322	--	--	0.05	--	0.35	Snell.imin= 63
1B	-19.234	-0.789	-3.831	4	0.6029	1.0161	0.9976	--	--	0.05	--	0.47	Snell.imin= 63

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1C	-19.234	0.682	-1.779	4	0.6029	1.0169	1.0322	--	--	0.05	--	0.31	Snell.imin=	63
1D	-19.234	0.682	-3.831	4	0.6029	1.0169	0.9976	--	--	0.05	--	0.43	Snell.imin=	63
1E	-2.626	-0.789	-1.779	4	0.6029	1.0022	1.0044	--	--	0.01	--	0.26	Snell.imin=	63
1F	-2.626	-0.789	-3.831	4	0.6029	1.0022	0.9997	--	--	0.01	--	0.39	Snell.imin=	63
1G	-2.626	0.682	-1.779	4	0.6029	1.0023	1.0044	--	--	0.01	--	0.24	Snell.imin=	63
1H	-2.626	0.682	-3.831	4	0.6029	1.0023	0.9997	--	--	0.01	--	0.37	Snell.imin=	63
1I	-20.842	-1.769	-1.692	4	0.6029	1.0174	0.9847	--	--	0.06	--	0.52	Snell.imin=	63
1J	-20.842	-1.769	-3.918	4	0.6029	1.0174	1.0231	--	--	0.06	--	0.67	Snell.imin=	63
1K	-20.842	1.662	-1.692	4	0.6029	1.0178	0.9847	--	--	0.06	--	0.48	Snell.imin=	63
1L	-20.842	1.662	-3.918	4	0.6029	1.0178	1.0231	--	--	0.06	--	0.63	Snell.imin=	63
1M	-1.018	-1.769	-1.692	4	0.6029	1.0009	0.9993	--	--	0.00	--	0.42	Snell.imin=	63
1N	-1.018	-1.769	-3.918	4	0.6029	1.0009	1.0011	--	--	0.00	--	0.56	Snell.imin=	63
1O	-1.018	1.662	-1.692	4	0.6029	1.0009	0.9993	--	--	0.00	--	0.40	Snell.imin=	63
1P	-1.018	1.662	-3.918	4	0.6029	1.0009	1.0011	--	--	0.00	--	0.54	Snell.imin=	63
2	-20.930	-0.102	-5.559	4	0.6029	1.0120	1.0108	--	--	0.06	--	0.47	Snell.imin=	63
7	-8.828	-0.024	-3.920	4	0.6029	0.9936	1.0001	--	--	0.03	--	0.29	Snell.imin=	63

ASTA NUM. 61 NI 149 NF 128 Lunghezza 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.19 0.97 3.44 4.59 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							
1A	0	-17.199	0.912	0.391	0.000	0.677	1.858	4	0.00	0.03	0.15	
1B	0	-17.199	1.816	0.391	0.000	0.677	-0.807	3	0.01	0.02	0.18	
1C	0	-17.199	0.912	-0.386	0.000	-0.767	1.858	4	0.00	0.03	0.26	
1D	0	-17.199	1.816	-0.386	0.000	-0.767	-0.807	4	0.01	0.03	0.23	
1E	0	-1.489	0.912	0.391	0.000	0.677	1.858	1	0.00	0.00	0.09	
1F	0	-1.489	1.816	0.391	0.000	0.677	-0.807	1	0.01	0.00	0.07	
1G	0	-1.489	0.912	-0.386	0.000	-0.767	1.858	4	0.00	0.00	0.25	
1H	0	-1.489	1.816	-0.386	0.000	-0.767	-0.807	4	0.01	0.00	0.17	
1I	0	-19.047	0.900	0.622	0.000	1.630	1.666	4	0.00	0.03	0.19	
1J	0	-19.047	1.828	0.622	0.000	1.630	-0.615	3	0.01	0.03	0.34	
1K	0	-19.047	0.900	-0.616	0.000	-1.720	1.666	4	0.00	0.03	0.42	
1L	0	-19.047	1.828	-0.616	0.000	-1.720	-0.615	4	0.01	0.03	0.39	
1M	0	0.359	0.900	0.622	0.000	1.630	1.666	1	0.00	0.00	0.16	
1N	0	0.359	1.828	0.622	0.000	1.630	-0.615	1	0.01	0.00	0.13	
1O	0	0.359	0.900	-0.616	0.000	-1.720	1.666	4	0.00	0.00	0.41	
1P	0	0.359	1.828	-0.616	0.000	-1.720	-0.615	4	0.01	0.00	0.33	
2	0	-17.990	2.606	0.004	0.000	-0.085	0.710	4	0.01	0.03	0.07	
7	0	-5.871	2.022	0.018	0.000	-0.014	1.623	4	0.01	0.01	0.11	
1A	61	-16.406	-0.423	0.391	0.000	0.533	2.100	4	0.00	0.03	0.16	
1B	61	-16.406	0.482	0.391	0.000	0.533	-0.198	3	0.00	0.02	0.12	
1C	61	-16.406	-0.423	-0.386	0.000	-0.627	2.100	4	0.00	0.03	0.25	
1D	61	-16.406	0.482	-0.386	0.000	-0.627	-0.198	4	0.00	0.03	0.17	
1E	61	-0.697	-0.423	0.391	0.000	0.533	2.100	1	0.00	0.00	0.09	
1F	61	-0.697	0.482	0.391	0.000	0.533	-0.198	3	0.00	0.00	0.10	
1G	61	-0.697	-0.423	-0.386	0.000	-0.627	2.100	4	0.00	0.00	0.24	
1H	61	-0.697	0.482	-0.386	0.000	-0.627	-0.198	4	0.00	0.00	0.12	
1I	61	-18.254	-0.434	0.622	0.000	1.287	1.847	4	0.00	0.03	0.18	
1J	61	-18.254	0.493	0.622	0.000	1.287	0.056	4	0.00	0.03	0.13	
1K	61	-18.254	-0.434	-0.616	0.000	-1.380	1.847	4	0.00	0.03	0.37	
1L	61	-18.254	0.493	-0.616	0.000	-1.380	0.056	4	0.00	0.03	0.31	
1M	61	1.151	-0.434	0.622	0.000	1.287	1.847	1	0.00	0.00	0.14	
1N	61	1.151	0.493	0.622	0.000	1.287	0.056	3	0.00	0.00	0.23	
1O	61	1.151	-0.434	-0.616	0.000	-1.380	1.847	4	0.00	0.00	0.36	
1P	61	1.151	0.493	-0.616	0.000	-1.380	0.056	4	0.00	0.00	0.25	
2	61	-16.510	0.115	0.004	0.000	-0.088	1.540	4	0.00	0.03	0.12	
7	61	-4.392	-0.469	0.018	0.000	-0.025	2.097	4	0.00	0.01	0.14	
1A	122	-15.614	-1.757	0.391	0.000	0.390	1.527	4	0.01	0.03	0.11	
1B	122	-15.614	-0.853	0.391	0.000	0.390	-0.403	3	0.00	0.02	0.11	
1C	122	-15.614	-1.757	-0.386	0.000	-0.486	1.527	4	0.01	0.03	0.19	
1D	122	-15.614	-0.853	-0.386	0.000	-0.486	-0.403	4	0.00	0.03	0.15	
1E	122	0.096	-1.757	0.391	0.000	0.390	1.527	1	0.01	0.00	0.06	
1F	122	0.096	-0.853	0.391	0.000	0.390	-0.403	1	0.00	0.00	0.04	
1G	122	0.096	-1.757	-0.386	0.000	-0.486	1.527	4	0.01	0.00	0.18	
1H	122	0.096	-0.853	-0.386	0.000	-0.486	-0.403	4	0.00	0.00	0.10	
1I	122	-17.462	-1.769	0.622	0.000	0.944	1.212	4	0.01	0.03	0.13	
1J	122	-17.462	-0.841	0.622	0.000	0.944	-0.089	4	0.00	0.03	0.10	
1K	122	-17.462	-1.769	-0.616	0.000	-1.041	1.212	4	0.01	0.03	0.27	
1L	122	-17.462	-0.841	-0.616	0.000	-1.041	-0.089	4	0.00	0.03	0.25	
1M	122	1.944	-1.769	0.622	0.000	0.944	1.212	1	0.01	0.00	0.10	
1N	122	1.944	-0.841	0.622	0.000	0.944	-0.089	3	0.00	0.00	0.17	
1O	122	1.944	-1.769	-0.616	0.000	-1.041	1.212	4	0.01	0.00	0.26	
1P	122	1.944	-0.841	-0.616	0.000	-1.041	-0.089	4	0.00	0.00	0.19	
2	122	-15.030	-2.376	0.004	0.000	-0.090	0.850	4	0.01	0.03	0.08	
7	122	-2.913	-2.960	0.018	0.000	-0.036	1.050	4	0.01	0.00	0.07	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota	
--	kN					kN*m								
1A	-17.199	0.677	2.100	4	0.6029	1.0502	1.0371	--	--	0.05	--	0.27	Snell.imin=	63
1B	-17.199	0.677	-0.807	3	0.5729	1.0441	1.0259	--	--	0.04	--	0.20	Snell.imin=	63
1C	-17.199	-0.767	2.100	4	0.6029	1.0536	1.0371	--	--	0.05	--	0.31	Snell.imin=	63
1D	-17.199	-0.767	-0.807	4	0.6029	1.0536	1.0311	--	--	0.05	--	0.28	Snell.imin=	63
1E	-1.489	0.677	2.100	1	0.5729	0.9991	1.0006	--	--	0.00	--	0.10	Snell.imin=	63
1F	-1.489	0.677	-0.807	3	0.5729	1.0038	1.0022	--	--	0.00	--	0.16	Snell.imin=	63
1G	-1.489	-0.767	2.100	4	0.6029	1.0046	1.0032	--	--	0.00	--	0.27	Snell.imin=	63
1H	-1.489	-0.767	-0.807	4	0.6029	1.0046	1.0027	--	--	0.00	--	0.19	Snell.imin=	63
1I	-19.047	1.630	1.847	4	0.6029	1.0558	1.0384	--	--	0.05	--	0.43	Snell.imin=	63
1J	-19.047	1.630	-0.615	4	0.6029	1.0558	1.0370	--	--	0.05	--	0.42	Snell.imin=	63

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1K	-19.047	-1.720	1.847	4	0.6029	1.0575	1.0384	--	--	0.05	--	0.47	Snell.imin=	63
1L	-19.047	-1.720	-0.615	4	0.6029	1.0575	1.0370	--	--	0.05	--	0.46	Snell.imin=	63
1M	1.944	1.630	1.847	1	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin=	63
1N	1.944	1.630	-0.615	3	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin=	63
1O	1.944	-1.720	1.847	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin=	63
1P	1.944	-1.720	-0.615	4	0.6029	0.0000	0.0000	--	--	--	--	--	Snell.imin=	63
2	-17.990	-0.090	1.540	4	0.6029	1.0753	1.0378	--	--	0.05	--	0.15	Snell.imin=	63
7	-5.871	-0.036	2.097	4	0.6029	1.0135	1.0113	--	--	0.02	--	0.15	Snell.imin=	63

ASTA NUM. 62 NI 128 NF 2 Lungh. 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso gy tot.

gy medio: 0.19 0.97 3.44 4.59 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m			--	--	--	--	--
1A	0	-15.108	-2.951	1.303	0.000	0.409	1.528	4	0.01	0.03	0.12	
1B	0	-15.108	0.267	1.303	0.000	0.409	-0.404	3	0.01	0.02	0.11	
1C	0	-15.108	-2.951	-0.871	0.000	-0.501	1.528	4	0.01	0.03	0.19	
1D	0	-15.108	0.267	-0.871	0.000	-0.501	-0.404	4	0.01	0.03	0.16	
1E	0	-0.390	-2.951	1.303	0.000	0.409	1.528	1	0.01	0.00	0.07	
1F	0	-0.390	0.267	1.303	0.000	0.409	-0.404	1	0.01	0.00	0.04	
1G	0	-0.390	-2.951	-0.871	0.000	-0.501	1.528	4	0.01	0.00	0.18	
1H	0	-0.390	0.267	-0.871	0.000	-0.501	-0.404	4	0.01	0.00	0.11	
1I	0	-17.053	-2.368	2.872	0.000	1.000	1.214	4	0.02	0.03	0.13	
1J	0	-17.053	-0.316	2.872	0.000	1.000	-0.090	4	0.02	0.03	0.10	
1K	0	-17.053	-2.368	-2.440	0.000	-1.092	1.214	4	0.02	0.03	0.28	
1L	0	-17.053	-0.316	-2.440	0.000	-1.092	-0.090	4	0.02	0.03	0.25	
1M	0	1.555	-2.368	2.872	0.000	1.000	1.214	1	0.02	0.00	0.10	
1N	0	1.555	-0.316	2.872	0.000	1.000	-0.090	3	0.02	0.00	0.18	
1O	0	1.555	-2.368	-2.440	0.000	-1.092	1.214	4	0.02	0.00	0.27	
1P	0	1.555	-0.316	-2.440	0.000	-1.092	-0.090	4	0.02	0.00	0.20	
2	0	-15.020	-2.428	0.410	0.000	-0.085	0.850	4	0.01	0.03	0.08	
7	0	-2.894	-3.008	0.074	0.000	-0.035	1.054	4	0.01	0.00	0.07	
1A	61	-14.316	-4.286	1.303	0.000	-0.410	-0.703	4	0.01	0.02	0.15	
1B	61	-14.316	-1.067	1.303	0.000	-0.410	-0.626	4	0.01	0.02	0.15	
1C	61	-14.316	-4.286	-0.871	0.000	0.054	-0.703	4	0.01	0.02	0.07	
1D	61	-14.316	-1.067	-0.871	0.000	0.054	-0.626	4	0.01	0.02	0.07	
1E	61	0.403	-4.286	1.303	0.000	-0.410	-0.703	4	0.01	0.00	0.10	
1F	61	0.403	-1.067	1.303	0.000	-0.410	-0.626	4	0.01	0.00	0.10	
1G	61	0.403	-4.286	-0.871	0.000	0.054	-0.703	1	0.01	0.00	0.02	
1H	61	0.403	-1.067	-0.871	0.000	0.054	-0.626	1	0.01	0.00	0.02	
1I	61	-16.260	-3.703	2.872	0.000	-0.761	-0.681	4	0.02	0.03	0.22	
1J	61	-16.260	-1.650	2.872	0.000	-0.761	-0.648	4	0.02	0.03	0.22	
1K	61	-16.260	-3.703	-2.440	0.000	0.406	-0.681	3	0.02	0.02	0.12	
1L	61	-16.260	-1.650	-2.440	0.000	0.406	-0.648	3	0.02	0.02	0.12	
1M	61	2.348	-3.703	2.872	0.000	-0.761	-0.681	4	0.02	0.01	0.17	
1N	61	2.348	-1.650	2.872	0.000	-0.761	-0.648	4	0.02	0.01	0.16	
1O	61	2.348	-3.703	-2.440	0.000	0.406	-0.681	3	0.02	0.01	0.10	
1P	61	2.348	-1.650	-2.440	0.000	0.406	-0.648	3	0.02	0.01	0.10	
2	61	-13.545	-4.919	0.410	0.000	-0.336	-1.392	4	0.02	0.02	0.16	
7	61	-1.415	-5.499	0.074	0.000	-0.080	-1.544	4	0.02	0.00	0.08	
1A	122	-13.523	-5.620	1.303	0.000	-1.229	-3.749	4	0.02	0.02	0.42	
1B	122	-13.523	-2.402	1.303	0.000	-1.229	-1.663	4	0.01	0.02	0.33	
1C	122	-13.523	-5.620	-0.871	0.000	0.610	-3.749	3	0.02	0.02	0.28	
1D	122	-13.523	-2.402	-0.871	0.000	0.610	-1.663	3	0.01	0.02	0.19	
1E	122	1.195	-5.620	1.303	0.000	-1.229	-3.749	4	0.02	0.00	0.37	
1F	122	1.195	-2.402	1.303	0.000	-1.229	-1.663	4	0.01	0.00	0.29	
1G	122	1.195	-5.620	-0.871	0.000	0.610	-3.749	1	0.02	0.00	0.13	
1H	122	1.195	-2.402	-0.871	0.000	0.610	-1.663	1	0.01	0.00	0.08	
1I	122	-15.468	-5.037	2.872	0.000	-2.523	-3.391	4	0.02	0.03	0.64	
1J	122	-15.468	-2.985	2.872	0.000	-2.523	-2.022	4	0.02	0.03	0.58	
1K	122	-15.468	-5.037	-2.440	0.000	1.904	-3.391	3	0.02	0.02	0.50	
1L	122	-15.468	-2.985	-2.440	0.000	1.904	-2.022	3	0.02	0.02	0.44	
1M	122	3.140	-5.037	2.872	0.000	-2.523	-3.391	4	0.02	0.01	0.59	
1N	122	3.140	-2.985	2.872	0.000	-2.523	-2.022	4	0.02	0.01	0.53	
1O	122	3.140	-5.037	-2.440	0.000	1.904	-3.391	1	0.02	0.01	0.22	
1P	122	3.140	-2.985	-2.440	0.000	1.904	-2.022	1	0.02	0.01	0.19	
2	122	-12.070	-7.410	0.410	0.000	-0.587	-5.156	4	0.02	0.02	0.36	
7	122	0.063	-7.991	0.074	0.000	-0.125	-5.662	4	0.03	0.00	0.26	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χ <sub>LT</sub>	I.S.n.	I.S.m.	I.S.	Nota
--	kN	kN*m			--	--	--	--	--	--	--	--	--
1A	-15.108	-1.229	-3.749	4	0.5729	0.9979	1.0005	--	--	0.04	--	0.41	Snell.imin= 63
1B	-15.108	-1.229	-1.663	4	0.5729	0.9979	1.0181	--	--	0.04	--	0.32	Snell.imin= 63
1C	-15.108	0.610	-3.749	4	0.5729	0.9759	1.0005	--	--	0.04	--	0.30	Snell.imin= 63
1D	-15.108	0.610	-1.663	4	0.5729	0.9759	1.0181	--	--	0.04	--	0.21	Snell.imin= 63
1E	-0.390	-1.229	-3.749	4	0.5729	0.9999	1.0000	--	--	0.00	--	0.37	Snell.imin= 63
1F	-0.390	-1.229	-1.663	4	0.5729	0.9999	1.0005	--	--	0.00	--	0.29	Snell.imin= 63
1G	-0.390	0.610	-3.749	4	0.5729	0.9994	1.0000	--	--	0.00	--	0.26	Snell.imin= 63
1H	-0.390	0.610	-1.663	4	0.5729	0.9994	1.0005	--	--	0.00	--	0.18	Snell.imin= 63
1I	-17.053	-2.523	-3.391	4	0.5729	0.9944	1.0024	--	--	0.04	--	0.62	Snell.imin= 63
1J	-17.053	-2.523	-2.022	4	0.5729	0.9944	1.0159	--	--	0.04	--	0.57	Snell.imin= 63
1K	-17.053	1.904	-3.391	4	0.5729	0.9854	1.0024	--	--	0.04	--	0.51	Snell.imin= 63
1L	-17.053	1.904	-2.022	4	0.5729	0.9854	1.0159	--	--	0.04	--	0.45	Snell.imin= 63
1M	3.140	-2.523	-3.391	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1N	3.140	-2.523	-2.022	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1O	3.140	1.904	-3.391	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
1P	3.140	1.904	-2.022	4	0.5729	0.0000	0.0000	--	--	--	--	--	Snell.imin= 63
2	-15.020	-0.587	-5.156	4	0.5729	1.0193	1.0057	--	--	0.04	--	0.35	Snell.imin= 63
7	-2.894	-0.125	-5.662	4	0.5729	1.0048	1.0009	--	--	0.01	--	0.26	Snell.imin= 63

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

ASTA NUM. 65 NI 133 NF 130 Lungh. 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.19 0.97 1.72 2.87 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	4.937	-1.748	0.963	0.000	0.622	1.073	1	0.01	0.01	0.08	
1B	0	4.937	-0.640	0.963	0.000	0.622	0.190	3	0.01	0.01	0.12	
1C	0	4.937	-1.748	-0.798	0.000	-0.376	1.073	4	0.01	0.01	0.14	
1D	0	4.937	-0.640	-0.798	0.000	-0.376	0.190	4	0.01	0.01	0.08	
1E	0	19.703	-1.748	0.963	0.000	0.622	1.073	3	0.01	0.04	0.18	
1F	0	19.703	-0.640	0.963	0.000	0.622	0.190	1	0.01	0.04	0.08	
1G	0	19.703	-1.748	-0.798	0.000	-0.376	1.073	4	0.01	0.04	0.16	
1H	0	19.703	-0.640	-0.798	0.000	-0.376	0.190	4	0.01	0.04	0.10	
1I	0	4.945	-1.609	1.280	0.000	0.749	0.998	1	0.01	0.01	0.08	
1J	0	4.945	-0.779	1.280	0.000	0.749	0.265	3	0.01	0.01	0.15	
1K	0	4.945	-1.609	-1.115	0.000	-0.503	0.998	4	0.01	0.01	0.16	
1L	0	4.945	-0.779	-1.115	0.000	-0.503	0.265	4	0.01	0.01	0.11	
1M	0	19.695	-1.609	1.280	0.000	0.749	0.998	3	0.01	0.04	0.20	
1N	0	19.695	-0.779	1.280	0.000	0.749	0.265	1	0.01	0.04	0.09	
1O	0	19.695	-1.609	-1.115	0.000	-0.503	0.998	4	0.01	0.04	0.18	
1P	0	19.695	-0.779	-1.115	0.000	-0.503	0.265	4	0.01	0.04	0.13	
2	0	22.520	-1.985	0.149	0.000	0.233	0.948	3	0.01	0.05	0.11	
7	0	17.850	-0.178	1.114	0.000	-0.317	-0.003	4	0.01	0.04	0.08	
1A	61	5.727	-3.082	0.963	0.000	-0.064	-0.603	4	0.01	0.01	0.04	
1B	61	5.727	-1.975	0.963	0.000	-0.064	-0.407	4	0.01	0.01	0.04	
1C	61	5.727	-3.082	-0.798	0.000	0.210	-0.603	3	0.01	0.01	0.07	
1D	61	5.727	-1.975	-0.798	0.000	0.210	-0.407	3	0.01	0.01	0.06	
1E	61	20.493	-3.082	0.963	0.000	-0.064	-0.603	1	0.01	0.05	0.05	
1F	61	20.493	-1.975	0.963	0.000	-0.064	-0.407	1	0.01	0.05	0.04	
1G	61	20.493	-3.082	-0.798	0.000	0.210	-0.603	1	0.01	0.05	0.06	
1H	61	20.493	-1.975	-0.798	0.000	0.210	-0.407	1	0.01	0.05	0.05	
1I	61	5.735	-2.944	1.280	0.000	-0.147	0.011	4	0.01	0.01	0.03	
1J	61	5.735	-2.113	1.280	0.000	-0.147	-1.020	4	0.01	0.01	0.08	
1K	61	5.735	-2.944	-1.115	0.000	0.292	0.011	1	0.01	0.01	0.03	
1L	61	5.735	-2.113	-1.115	0.000	0.292	-1.020	3	0.01	0.01	0.10	
1M	61	20.485	-2.944	1.280	0.000	-0.147	0.011	1	0.01	0.05	0.04	
1N	61	20.485	-2.113	1.280	0.000	-0.147	-1.020	3	0.01	0.05	0.10	
1O	61	20.485	-2.944	-1.115	0.000	0.292	0.011	1	0.01	0.05	0.05	
1P	61	20.485	-2.113	-1.115	0.000	0.292	-1.020	3	0.01	0.05	0.12	
2	61	24.000	-4.476	0.149	0.000	0.142	-1.025	3	0.01	0.05	0.10	
7	61	18.395	-1.094	1.114	0.000	-0.997	-0.391	4	0.01	0.04	0.22	
1A	122	6.517	-4.417	0.963	0.000	-0.751	-3.093	4	0.01	0.01	0.27	
1B	122	6.517	-3.309	0.963	0.000	-0.751	-1.819	4	0.01	0.01	0.22	
1C	122	6.517	-4.417	-0.798	0.000	0.796	-3.093	1	0.01	0.01	0.14	
1D	122	6.517	-3.309	-0.798	0.000	0.796	-1.819	3	0.01	0.01	0.22	
1E	122	21.283	-4.417	0.963	0.000	-0.751	-3.093	4	0.01	0.05	0.29	
1F	122	21.283	-3.309	0.963	0.000	-0.751	-1.819	4	0.01	0.05	0.24	
1G	122	21.283	-4.417	-0.798	0.000	0.796	-3.093	3	0.01	0.05	0.30	
1H	122	21.283	-3.309	-0.798	0.000	0.796	-1.819	3	0.01	0.05	0.24	
1I	122	6.525	-4.278	1.280	0.000	-1.043	-1.792	4	0.01	0.01	0.27	
1J	122	6.525	-3.448	1.280	0.000	-1.043	-3.120	4	0.01	0.01	0.32	
1K	122	6.525	-4.278	-1.115	0.000	1.088	-1.792	3	0.01	0.01	0.27	
1L	122	6.525	-3.448	-1.115	0.000	1.088	-3.120	1	0.01	0.01	0.16	
1M	122	21.275	-4.278	1.280	0.000	-1.043	-1.792	4	0.01	0.05	0.29	
1N	122	21.275	-3.448	1.280	0.000	-1.043	-3.120	4	0.01	0.05	0.34	
1O	122	21.275	-4.278	-1.115	0.000	1.088	-1.792	3	0.01	0.05	0.29	
1P	122	21.275	-3.448	-1.115	0.000	1.088	-3.120	3	0.01	0.05	0.35	
2	122	25.480	-6.967	0.149	0.000	0.052	-4.518	3	0.02	0.06	0.23	
7	122	18.940	-2.010	1.114	0.000	-1.677	-1.339	4	0.01	0.04	0.38	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	kN		kN*m										
1A	6.517	-0.751	-3.093	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1B	6.517	-0.751	-1.819	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1C	6.517	0.796	-3.093	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1D	6.517	0.796	-1.819	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1E	21.283	-0.751	-3.093	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1F	21.283	-0.751	-1.819	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1G	21.283	0.796	-3.093	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1H	21.283	0.796	-1.819	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1I	6.525	-1.043	-1.792	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1J	6.525	-1.043	-3.120	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1K	6.525	1.088	-1.792	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1L	6.525	1.088	-3.120	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1M	21.275	-1.043	-1.792	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1N	21.275	-1.043	-3.120	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1O	21.275	1.088	-1.792	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1P	21.275	1.088	-3.120	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
2	25.480	0.233	-4.518	3	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
7	18.940	-1.677	-1.339	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0

ASTA NUM. 66 NI 132 NF 133 Lungh. 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.19 0.97 1.72 2.87 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
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# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

		-----			-----			-----			
	cm	kN		kN*m							
1A	0	3.530	1.211	0.261	0.000	0.309	0.806	1	0.00	0.01	0.05
1B	0	3.530	1.827	0.261	0.000	0.309	0.010	1	0.01	0.01	0.03
1C	0	3.530	1.211	-0.694	0.000	-0.559	0.806	4	0.01	0.01	0.15
1D	0	3.530	1.827	-0.694	0.000	-0.559	0.010	4	0.01	0.01	0.10
1E	0	17.850	1.211	0.261	0.000	0.309	0.806	3	0.00	0.04	0.11
1F	0	17.850	1.827	0.261	0.000	0.309	0.010	1	0.01	0.04	0.05
1G	0	17.850	1.211	-0.694	0.000	-0.559	0.806	4	0.01	0.04	0.17
1H	0	17.850	1.827	-0.694	0.000	-0.559	0.010	4	0.01	0.04	0.12
1I	0	3.338	1.175	0.308	0.000	0.448	0.685	1	0.00	0.01	0.05
1J	0	3.338	1.863	0.308	0.000	0.448	0.131	3	0.01	0.01	0.09
1K	0	3.338	1.175	-0.741	0.000	-0.698	0.685	4	0.01	0.01	0.17
1L	0	3.338	1.863	-0.741	0.000	-0.698	0.131	4	0.01	0.01	0.14
1M	0	18.042	1.175	0.308	0.000	0.448	0.685	3	0.00	0.04	0.13
1N	0	18.042	1.863	0.308	0.000	0.448	0.131	1	0.01	0.04	0.06
1O	0	18.042	1.175	-0.741	0.000	-0.698	0.685	4	0.01	0.04	0.19
1P	0	18.042	1.863	-0.741	0.000	-0.698	0.131	4	0.01	0.04	0.16
2	0	19.480	3.063	-0.411	0.000	-0.239	0.253	4	0.01	0.04	0.08
7	0	16.870	1.673	0.633	0.000	0.399	-0.921	3	0.01	0.04	0.13
-----											
1A	61	4.320	-0.123	0.261	0.000	-0.027	1.349	1	0.00	0.01	0.04
1B	61	4.320	0.492	0.261	0.000	-0.027	0.508	4	0.00	0.01	0.04
1C	61	4.320	-0.123	-0.694	0.000	0.041	1.349	1	0.01	0.01	0.04
1D	61	4.320	0.492	-0.694	0.000	0.041	0.508	4	0.01	0.01	0.04
1E	61	18.640	-0.123	0.261	0.000	-0.027	1.349	4	0.00	0.04	0.11
1F	61	18.640	0.492	0.261	0.000	-0.027	0.508	3	0.00	0.04	0.05
1G	61	18.640	-0.123	-0.694	0.000	0.041	1.349	4	0.01	0.04	0.11
1H	61	18.640	0.492	-0.694	0.000	0.041	0.508	3	0.01	0.04	0.05
1I	61	4.128	-0.160	0.308	0.000	-0.019	0.883	1	0.00	0.01	0.03
1J	61	4.128	0.529	0.308	0.000	-0.019	0.974	1	0.00	0.01	0.03
1K	61	4.128	-0.160	-0.741	0.000	0.033	0.883	1	0.01	0.01	0.03
1L	61	4.128	0.529	-0.741	0.000	0.033	0.974	1	0.01	0.01	0.03
1M	61	18.832	-0.160	0.308	0.000	-0.019	0.883	3	0.00	0.04	0.07
1N	61	18.832	0.529	0.308	0.000	-0.019	0.974	3	0.00	0.04	0.07
1O	61	18.832	-0.160	-0.741	0.000	0.033	0.883	3	0.01	0.04	0.07
1P	61	18.832	0.529	-0.741	0.000	0.033	0.974	3	0.01	0.04	0.07
2	61	20.960	0.572	-0.411	0.000	0.012	1.363	3	0.00	0.05	0.09
7	61	17.415	0.757	0.633	0.000	0.013	-0.179	1	0.00	0.04	0.03
-----											
1A	122	5.110	-1.458	0.261	0.000	-0.364	1.076	4	0.00	0.01	0.14
1B	122	5.110	-0.842	0.261	0.000	-0.364	0.191	4	0.00	0.01	0.08
1C	122	5.110	-1.458	-0.694	0.000	0.641	1.076	1	0.01	0.01	0.08
1D	122	5.110	-0.842	-0.694	0.000	0.641	0.191	3	0.01	0.01	0.13
1E	122	19.430	-1.458	0.261	0.000	-0.364	1.076	4	0.00	0.04	0.16
1F	122	19.430	-0.842	0.261	0.000	-0.364	0.191	4	0.00	0.04	0.10
1G	122	19.430	-1.458	-0.694	0.000	0.641	1.076	3	0.01	0.04	0.18
1H	122	19.430	-0.842	-0.694	0.000	0.641	0.191	1	0.01	0.04	0.08
1I	122	4.918	-1.494	0.308	0.000	-0.486	0.266	4	0.00	0.01	0.11
1J	122	4.918	-0.806	0.308	0.000	-0.486	1.002	4	0.00	0.01	0.15
1K	122	4.918	-1.494	-0.741	0.000	0.764	0.266	3	0.01	0.01	0.15
1L	122	4.918	-0.806	-0.741	0.000	0.764	1.002	1	0.01	0.01	0.09
1M	122	19.622	-1.494	0.308	0.000	-0.486	0.266	4	0.00	0.04	0.13
1N	122	19.622	-0.806	0.308	0.000	-0.486	1.002	4	0.00	0.04	0.17
1O	122	19.622	-1.494	-0.741	0.000	0.764	0.266	1	0.01	0.04	0.09
1P	122	19.622	-0.806	-0.741	0.000	0.764	1.002	3	0.01	0.04	0.20
2	122	22.440	-1.919	-0.411	0.000	0.263	0.952	3	0.01	0.05	0.12
7	122	17.960	-0.160	0.633	0.000	-0.374	0.003	4	0.00	0.04	0.09

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	5.110	-0.364	1.349	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1B	5.110	-0.364	0.508	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1C	5.110	0.641	1.349	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1D	5.110	0.641	0.508	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1E	19.430	-0.364	1.349	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1F	19.430	-0.364	0.508	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1G	19.430	0.641	1.349	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1H	19.430	0.641	0.508	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1I	4.918	-0.486	0.883	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1J	4.918	-0.486	1.002	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1K	4.918	0.764	0.883	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1L	4.918	0.764	1.002	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1M	19.622	-0.486	0.883	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1N	19.622	-0.486	1.002	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1O	19.622	0.764	0.883	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1P	19.622	0.764	1.002	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
2	22.440	0.263	1.363	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
7	17.960	0.399	-0.921	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0

**ASTA NUM. 67** NI 129 NF 132 Lugh. 122.1 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.97 1.72 2.87 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	2.119	3.669	1.061	0.000	0.926	-2.704	1	0.01	0.00	0.13	
1B	0	2.119	4.805	1.061	0.000	0.926	-3.564	1	0.02	0.00	0.15	
1C	0	2.119	3.669	-0.886	0.000	-0.928	-2.704	4	0.01	0.00	0.28	
1D	0	2.119	4.805	-0.886	0.000	-0.928	-3.564	4	0.02	0.00	0.31	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1E	0	15.981	3.669	1.061	0.000	0.926	-2.704	3	0.01	0.04	0.30
1F	0	15.981	4.805	1.061	0.000	0.926	-3.564	3	0.02	0.04	0.33
1G	0	15.981	3.669	-0.886	0.000	-0.928	-2.704	4	0.01	0.04	0.30
1H	0	15.981	4.805	-0.886	0.000	-0.928	-3.564	4	0.02	0.04	0.33
1I	0	1.780	3.743	1.348	0.000	1.171	-2.548	1	0.01	0.00	0.15
1J	0	1.780	4.731	1.348	0.000	1.171	-3.720	1	0.02	0.00	0.17
1K	0	1.780	3.743	-1.172	0.000	-1.174	-2.548	4	0.01	0.00	0.31
1L	0	1.780	4.731	-1.172	0.000	-1.174	-3.720	4	0.02	0.00	0.36
1M	0	16.320	3.743	1.348	0.000	1.171	-2.548	3	0.01	0.04	0.33
1N	0	16.320	4.731	1.348	0.000	1.171	-3.720	3	0.02	0.04	0.38
1O	0	16.320	3.743	-1.172	0.000	-1.174	-2.548	4	0.01	0.04	0.33
1P	0	16.320	4.731	-1.172	0.000	-1.174	-3.720	4	0.02	0.04	0.38
2	0	16.440	8.121	0.160	0.000	-0.011	-6.620	1	0.03	0.04	0.18
7	0	15.880	3.537	0.996	0.000	1.560	-4.117	3	0.01	0.04	0.47
1A	61	2.909	2.334	1.061	0.000	0.191	-0.939	3	0.01	0.01	0.08
1B	61	2.909	3.470	1.061	0.000	0.191	-0.971	3	0.01	0.01	0.08
1C	61	2.909	2.334	-0.886	0.000	-0.301	-0.939	4	0.01	0.01	0.10
1D	61	2.909	3.470	-0.886	0.000	-0.301	-0.971	4	0.01	0.01	0.10
1E	61	16.771	2.334	1.061	0.000	0.191	-0.939	1	0.01	0.04	0.06
1F	61	16.771	3.470	1.061	0.000	0.191	-0.971	1	0.01	0.04	0.06
1G	61	16.771	2.334	-0.886	0.000	-0.301	-0.939	4	0.01	0.04	0.11
1H	61	16.771	3.470	-0.886	0.000	-0.301	-0.971	4	0.01	0.04	0.12
1I	61	2.570	2.408	1.348	0.000	0.243	-0.801	3	0.01	0.01	0.08
1J	61	2.570	3.396	1.348	0.000	0.243	-1.110	1	0.01	0.01	0.05
1K	61	2.570	2.408	-1.172	0.000	-0.353	-0.801	4	0.01	0.01	0.10
1L	61	2.570	3.396	-1.172	0.000	-0.353	-1.110	4	0.01	0.01	0.11
1M	61	17.110	2.408	1.348	0.000	0.243	-0.801	1	0.01	0.04	0.06
1N	61	17.110	3.396	1.348	0.000	0.243	-1.110	3	0.01	0.04	0.11
1O	61	17.110	2.408	-1.172	0.000	-0.353	-0.801	4	0.01	0.04	0.12
1P	61	17.110	3.396	-1.172	0.000	-0.353	-1.110	4	0.01	0.04	0.13
2	61	17.920	5.630	0.160	0.000	-0.109	-2.422	3	0.02	0.04	0.14
7	61	16.425	2.621	0.996	0.000	0.952	-2.237	3	0.01	0.04	0.28
1A	122	3.699	0.999	1.061	0.000	-0.543	0.011	4	0.01	0.01	0.10
1B	122	3.699	2.135	1.061	0.000	-0.543	0.807	4	0.01	0.01	0.15
1C	122	3.699	0.999	-0.886	0.000	0.326	0.011	1	0.01	0.01	0.03
1D	122	3.699	2.135	-0.886	0.000	0.326	0.807	1	0.01	0.01	0.05
1E	122	17.561	0.999	1.061	0.000	-0.543	0.011	4	0.01	0.04	0.12
1F	122	17.561	2.135	1.061	0.000	-0.543	0.807	4	0.01	0.04	0.17
1G	122	17.561	0.999	-0.886	0.000	0.326	0.011	1	0.01	0.04	0.05
1H	122	17.561	2.135	-0.886	0.000	0.326	0.807	3	0.01	0.04	0.11
1I	122	3.360	1.073	1.348	0.000	-0.685	0.132	4	0.01	0.01	0.13
1J	122	3.360	2.061	1.348	0.000	-0.685	0.686	4	0.01	0.01	0.17
1K	122	3.360	1.073	-1.172	0.000	0.468	0.132	3	0.01	0.01	0.09
1L	122	3.360	2.061	-1.172	0.000	0.468	0.686	1	0.01	0.01	0.05
1M	122	17.900	1.073	1.348	0.000	-0.685	0.132	4	0.01	0.04	0.15
1N	122	17.900	2.061	1.348	0.000	-0.685	0.686	4	0.01	0.04	0.19
1O	122	17.900	1.073	-1.172	0.000	0.468	0.132	1	0.01	0.04	0.06
1P	122	17.900	2.061	-1.172	0.000	0.468	0.686	3	0.01	0.04	0.13
2	122	19.400	3.139	0.160	0.000	-0.207	0.254	4	0.01	0.04	0.08
7	122	16.970	1.705	0.996	0.000	0.345	-0.916	3	0.01	0.04	0.12

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	3.699	0.926	-2.704	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1B	3.699	0.926	-3.564	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1C	3.699	-0.928	-2.704	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1D	3.699	-0.928	-3.564	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1E	17.561	0.926	-2.704	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1F	17.561	0.926	-3.564	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1G	17.561	-0.928	-2.704	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1H	17.561	-0.928	-3.564	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1I	3.360	1.171	-2.548	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1J	3.360	1.171	-3.720	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1K	3.360	-1.174	-2.548	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1L	3.360	-1.174	-3.720	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1M	17.900	1.171	-2.548	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1N	17.900	1.171	-3.720	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1O	17.900	-1.174	-2.548	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
1P	17.900	-1.174	-3.720	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
2	19.400	-0.207	-6.620	4	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0
7	16.970	1.560	-4.117	3	0.0000	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 0

ASTA NUM. 68 NI 83 NF 115 Lung. 114.9 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.98 3.48 4.65 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-18.173	1.896	0.573	0.000	-0.023	-0.659	4	0.01	0.03	0.09	
1B	0	-18.173	3.504	0.573	0.000	-0.023	-2.005	4	0.01	0.03	0.15	
1C	0	-18.173	1.896	-0.904	0.000	-0.138	-0.659	4	0.01	0.03	0.11	
1D	0	-18.173	3.504	-0.904	0.000	-0.138	-2.005	4	0.01	0.03	0.17	
1E	0	3.091	1.896	0.573	0.000	-0.023	-0.659	3	0.01	0.01	0.04	
1F	0	3.091	3.504	0.573	0.000	-0.023	-2.005	1	0.01	0.01	0.05	
1G	0	3.091	1.896	-0.904	0.000	-0.138	-0.659	4	0.01	0.01	0.06	
1H	0	3.091	3.504	-0.904	0.000	-0.138	-2.005	4	0.01	0.01	0.11	
1I	0	-16.642	2.098	1.372	0.000	-0.016	-0.863	4	0.01	0.03	0.09	
1J	0	-16.642	3.302	1.372	0.000	-0.016	-1.801	4	0.01	0.03	0.13	
1K	0	-16.642	2.098	-1.703	0.000	-0.144	-0.863	4	0.01	0.03	0.12	
1L	0	-16.642	3.302	-1.703	0.000	-0.144	-1.801	4	0.01	0.03	0.16	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1M	0	1.560	2.098	1.372	0.000	-0.016	-0.863	4	0.01	0.00	0.04
1N	0	1.560	3.302	1.372	0.000	-0.016	-1.801	4	0.01	0.00	0.08
1O	0	1.560	2.098	-1.703	0.000	-0.144	-0.863	4	0.01	0.00	0.06
1P	0	1.560	3.302	-1.703	0.000	-0.144	-1.801	4	0.01	0.00	0.10
2	0	-5.343	4.801	-0.303	0.000	-0.143	-2.077	4	0.02	0.01	0.13
7	0	-10.780	5.401	-0.853	0.000	-0.393	-2.153	4	0.02	0.02	0.19
1A	57	-17.453	0.625	0.573	0.000	-0.372	-0.053	4	0.00	0.03	0.13
1B	57	-17.453	2.233	0.573	0.000	-0.372	-0.238	4	0.01	0.03	0.13
1C	57	-17.453	0.625	-0.904	0.000	0.401	-0.053	4	0.01	0.03	0.07
1D	57	-17.453	2.233	-0.904	0.000	0.401	-0.238	4	0.01	0.03	0.08
1E	57	3.811	0.625	0.573	0.000	-0.372	-0.053	4	0.00	0.01	0.07
1F	57	3.811	2.233	0.573	0.000	-0.372	-0.238	4	0.01	0.01	0.08
1G	57	3.811	0.625	-0.904	0.000	0.401	-0.053	1	0.01	0.01	0.04
1H	57	3.811	2.233	-0.904	0.000	0.401	-0.238	3	0.01	0.01	0.09
1I	57	-15.922	0.827	1.372	0.000	0.932	-0.104	4	0.01	0.03	0.10
1J	57	-15.922	2.030	1.372	0.000	0.932	-0.188	4	0.01	0.03	0.10
1K	57	-15.922	0.827	-1.703	0.000	-0.903	-0.104	4	0.01	0.03	0.22
1L	57	-15.922	2.030	-1.703	0.000	-0.903	-0.188	4	0.01	0.03	0.22
1M	57	2.280	0.827	1.372	0.000	0.932	-0.104	1	0.01	0.01	0.07
1N	57	2.280	2.030	1.372	0.000	0.932	-0.188	3	0.01	0.01	0.17
1O	57	2.280	0.827	-1.703	0.000	-0.903	-0.104	4	0.01	0.01	0.17
1P	57	2.280	2.030	-1.703	0.000	-0.903	-0.188	4	0.01	0.01	0.17
2	57	-3.999	2.429	-0.303	0.000	0.032	0.001	4	0.01	0.01	0.01
7	57	-9.436	3.028	-0.853	0.000	0.097	0.269	4	0.01	0.02	0.02
1A	115	-16.733	-0.647	0.573	0.000	-0.721	-0.178	4	0.00	0.03	0.19
1B	115	-16.733	0.962	0.573	0.000	-0.721	0.798	4	0.00	0.03	0.19
1C	115	-16.733	-0.647	-0.904	0.000	0.941	-0.178	4	0.01	0.03	0.10
1D	115	-16.733	0.962	-0.904	0.000	0.941	0.798	4	0.01	0.03	0.10
1E	115	4.531	-0.647	0.573	0.000	-0.721	-0.178	4	0.00	0.01	0.14
1F	115	4.531	0.962	0.573	0.000	-0.721	0.798	4	0.00	0.01	0.18
1G	115	4.531	-0.647	-0.904	0.000	0.941	-0.178	3	0.01	0.01	0.18
1H	115	4.531	0.962	-0.904	0.000	0.941	0.798	1	0.01	0.01	0.09
1I	115	-15.202	-0.444	1.372	0.000	1.881	-0.075	4	0.01	0.03	0.15
1J	115	-15.202	0.759	1.372	0.000	1.881	0.695	4	0.01	0.03	0.15
1K	115	-15.202	-0.444	-1.703	0.000	-1.661	-0.075	4	0.01	0.03	0.35
1L	115	-15.202	0.759	-1.703	0.000	-1.661	0.695	4	0.01	0.03	0.35
1M	115	3.000	-0.444	1.372	0.000	1.881	-0.075	1	0.01	0.01	0.14
1N	115	3.000	0.759	1.372	0.000	1.881	0.695	1	0.01	0.01	0.16
1O	115	3.000	-0.444	-1.703	0.000	-1.661	-0.075	4	0.01	0.01	0.30
1P	115	3.000	0.759	-1.703	0.000	-1.661	0.695	4	0.01	0.01	0.34
2	115	-2.655	0.057	-0.303	0.000	0.206	0.715	1	0.00	0.00	0.04
7	115	-8.091	0.656	-0.853	0.000	0.587	1.328	1	0.01	0.01	0.08

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN		kN*m										
1A	-18.173	-0.721	-0.659	4	0.5887	1.0162	1.0271	--	--	0.04	--	0.21	Snell.imin= 59
1B	-18.173	-0.721	-2.005	4	0.5887	1.0162	1.0039	--	--	0.04	--	0.29	Snell.imin= 59
1C	-18.173	0.941	-0.659	4	0.5887	1.0071	1.0271	--	--	0.04	--	0.25	Snell.imin= 59
1D	-18.173	0.941	-2.005	4	0.5887	1.0071	1.0039	--	--	0.04	--	0.33	Snell.imin= 59
1E	4.531	-0.721	-0.659	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1F	4.531	-0.721	-2.005	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1G	4.531	0.941	-0.659	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1H	4.531	0.941	-2.005	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1I	-16.642	1.881	-0.863	4	0.5887	1.0130	1.0216	--	--	0.04	--	0.43	Snell.imin= 59
1J	-16.642	1.881	-1.801	4	0.5887	1.0130	1.0046	--	--	0.04	--	0.48	Snell.imin= 59
1K	-16.642	-1.661	-0.863	4	0.5887	1.0175	1.0216	--	--	0.04	--	0.39	Snell.imin= 59
1L	-16.642	-1.661	-1.801	4	0.5887	1.0175	1.0046	--	--	0.04	--	0.45	Snell.imin= 59
1M	3.000	1.881	-0.863	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1N	3.000	1.881	-1.801	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1O	3.000	-1.661	-0.863	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1P	3.000	-1.661	-1.801	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
2	-5.343	0.206	-2.077	4	0.5887	0.9939	1.0015	--	--	0.01	--	0.18	Snell.imin= 59
7	-10.780	0.587	-2.153	4	0.5887	0.9883	0.9982	--	--	0.02	--	0.26	Snell.imin= 59

**ASTA NUM. 69** NI 115 NF 114 Lugh. 114.9 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.98 3.48 4.65 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN		kN*m		kN*m						
1A	0	-16.825	-0.412	0.271	0.000	0.873	0.799	4	0.00	0.03	0.10	
1B	0	-16.825	0.581	0.271	0.000	0.873	-0.175	4	0.00	0.03	0.10	
1C	0	-16.825	-0.412	-0.815	0.000	-0.752	0.799	4	0.01	0.03	0.19	
1D	0	-16.825	0.581	-0.815	0.000	-0.752	-0.175	4	0.01	0.03	0.20	
1E	0	4.871	-0.412	0.271	0.000	0.873	0.799	1	0.00	0.01	0.09	
1F	0	4.871	0.581	0.271	0.000	0.873	-0.175	3	0.00	0.01	0.17	
1G	0	4.871	-0.412	-0.815	0.000	-0.752	0.799	4	0.01	0.01	0.19	
1H	0	4.871	0.581	-0.815	0.000	-0.752	-0.175	4	0.01	0.01	0.15	
1I	0	-15.182	-0.233	0.769	0.000	1.796	0.697	4	0.01	0.03	0.14	
1J	0	-15.182	0.402	0.769	0.000	1.796	-0.073	4	0.01	0.03	0.14	
1K	0	-15.182	-0.233	-1.313	0.000	-1.676	0.697	4	0.01	0.03	0.35	
1L	0	-15.182	0.402	-1.313	0.000	-1.676	-0.073	4	0.01	0.03	0.35	
1M	0	3.228	-0.233	0.769	0.000	1.796	0.697	1	0.01	0.01	0.15	
1N	0	3.228	0.402	0.769	0.000	1.796	-0.073	1	0.01	0.01	0.14	
1O	0	3.228	-0.233	-1.313	0.000	-1.676	0.697	4	0.01	0.01	0.34	
1P	0	3.228	0.402	-1.313	0.000	-1.676	-0.073	4	0.01	0.01	0.30	
2	0	-2.438	-0.060	-0.497	0.000	0.116	0.719	1	0.00	0.00	0.03	
7	0	-7.626	0.470	-1.014	0.000	0.385	1.332	1	0.01	0.01	0.07	
1A	57	-16.105	-1.684	0.271	0.000	0.828	0.552	4	0.01	0.03	0.08	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1B	57	-16.105	-0.690	0.271	0.000	0.828	-0.561	3	0.00	0.02	0.19	
1C	57	-16.105	-1.684	-0.815	0.000	-0.395	0.552	4	0.01	0.03	0.11	
1D	57	-16.105	-0.690	-0.815	0.000	-0.395	-0.561	4	0.01	0.03	0.15	
1E	57	5.591	-1.684	0.271	0.000	0.828	0.552	4	0.01	0.01	0.09	
1F	57	5.591	-0.690	0.271	0.000	0.828	-0.561	3	0.00	0.01	0.18	
1G	57	5.591	-1.684	-0.815	0.000	-0.395	0.552	4	0.01	0.01	0.11	
1H	57	5.591	-0.690	-0.815	0.000	-0.395	-0.561	4	0.01	0.01	0.10	
1I	57	-14.462	-1.505	0.769	0.000	1.410	0.454	4	0.01	0.02	0.11	
1J	57	-14.462	-0.869	0.769	0.000	1.410	-0.464	3	0.01	0.02	0.29	
1K	57	-14.462	-1.505	-1.313	0.000	-0.977	0.454	4	0.01	0.02	0.21	
1L	57	-14.462	-0.869	-1.313	0.000	-0.977	-0.464	4	0.01	0.02	0.24	
1M	57	3.948	-1.505	0.769	0.000	1.410	0.454	4	0.01	0.01	0.11	
1N	57	3.948	-0.869	0.769	0.000	1.410	-0.464	3	0.01	0.01	0.27	
1O	57	3.948	-1.505	-1.313	0.000	-0.977	0.454	4	0.01	0.01	0.21	
1P	57	3.948	-0.869	-1.313	0.000	-0.977	-0.464	4	0.01	0.01	0.20	
2	57	-1.093	-2.433	-0.497	0.000	0.401	0.003	4	0.01	0.00	0.03	
7	57	-6.282	-1.902	-1.014	0.000	0.968	0.921	4	0.01	0.01	0.11	
1A	115	-15.385	-2.955	0.271	0.000	0.783	-0.427	3	0.01	0.02	0.18	
1B	115	-15.385	-1.961	0.271	0.000	0.783	-1.677	3	0.01	0.02	0.23	
1C	115	-15.385	-2.955	-0.815	0.000	-0.037	-0.427	4	0.01	0.03	0.08	
1D	115	-15.385	-1.961	-0.815	0.000	-0.037	-1.677	4	0.01	0.03	0.13	
1E	115	6.311	-2.955	0.271	0.000	0.783	-0.427	3	0.01	0.01	0.16	
1F	115	6.311	-1.961	0.271	0.000	0.783	-1.677	3	0.01	0.01	0.22	
1G	115	6.311	-2.955	-0.815	0.000	-0.037	-0.427	3	0.01	0.01	0.03	
1H	115	6.311	-1.961	-0.815	0.000	-0.037	-1.677	3	0.01	0.01	0.08	
1I	115	-13.742	-2.776	0.769	0.000	1.024	-0.519	3	0.01	0.02	0.22	
1J	115	-13.742	-2.140	0.769	0.000	1.024	-1.585	3	0.01	0.02	0.26	
1K	115	-13.742	-2.776	-1.313	0.000	-0.278	-0.519	4	0.01	0.02	0.12	
1L	115	-13.742	-2.140	-1.313	0.000	-0.278	-1.585	4	0.01	0.02	0.16	
1M	115	4.668	-2.776	0.769	0.000	1.024	-0.519	3	0.01	0.01	0.21	
1N	115	4.668	-2.140	0.769	0.000	1.024	-1.585	3	0.01	0.01	0.25	
1O	115	4.668	-2.776	-1.313	0.000	-0.278	-0.519	4	0.01	0.01	0.08	
1P	115	4.668	-2.140	-1.313	0.000	-0.278	-1.585	4	0.01	0.01	0.12	
2	115	0.251	-4.805	-0.497	0.000	0.687	-2.077	1	0.02	0.00	0.10	
7	115	-4.937	-4.275	-1.014	0.000	1.550	-0.854	3	0.01	0.01	0.31	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\chi_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	kN	kN*m											
1A	-16.825	0.873	0.799	4	0.5887	1.0561	1.0106	--	--	0.04	--	0.23	Snell.imin= 59
1B	-16.825	0.873	-1.677	4	0.5887	1.0561	1.0168	--	--	0.04	--	0.27	Snell.imin= 59
1C	-16.825	-0.752	0.799	4	0.5887	1.0159	1.0106	--	--	0.04	--	0.21	Snell.imin= 59
1D	-16.825	-0.752	-1.677	4	0.5887	1.0159	1.0168	--	--	0.04	--	0.24	Snell.imin= 59
1E	6.311	0.873	0.799	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1F	6.311	0.873	-1.677	3	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1G	6.311	-0.752	0.799	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1H	6.311	-0.752	-1.677	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1I	-15.182	1.796	0.697	4	0.5887	1.0366	1.0073	--	--	0.03	--	0.39	Snell.imin= 59
1J	-15.182	1.796	-1.585	4	0.5887	1.0366	1.0146	--	--	0.03	--	0.43	Snell.imin= 59
1K	-15.182	-1.676	0.697	4	0.5887	1.0193	1.0073	--	--	0.03	--	0.36	Snell.imin= 59
1L	-15.182	-1.676	-1.585	4	0.5887	1.0193	1.0146	--	--	0.03	--	0.40	Snell.imin= 59
1M	4.668	1.796	0.697	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1N	4.668	1.796	-1.585	3	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1O	4.668	-1.676	0.697	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1P	4.668	-1.676	-1.585	4	0.5887	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
2	-2.438	0.687	-2.077	4	0.5887	1.0031	1.0007	--	--	0.01	--	0.21	Snell.imin= 59
7	-7.626	1.550	1.332	4	0.5887	1.0115	1.0003	--	--	0.02	--	0.35	Snell.imin= 59

ASTA NUM. 70 NI 114 NF 84 Lungh. 114.9 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente Congresso qy tot.

qy medio: 0.19 0.98 3.48 4.65 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							
1A	0	-15.422	-3.148	1.336	0.000	0.773	-0.426	3	0.01	0.02	0.17	
1B	0	-15.422	-1.890	1.336	0.000	0.773	-1.678	3	0.01	0.02	0.23	
1C	0	-15.422	-3.148	-1.403	0.000	-0.096	-0.426	4	0.01	0.03	0.09	
1D	0	-15.422	-1.890	-1.403	0.000	-0.096	-1.678	4	0.01	0.03	0.14	
1E	0	6.532	-3.148	1.336	0.000	0.773	-0.426	3	0.01	0.01	0.16	
1F	0	6.532	-1.890	1.336	0.000	0.773	-1.678	3	0.01	0.01	0.21	
1G	0	6.532	-3.148	-1.403	0.000	-0.096	-0.426	4	0.01	0.01	0.04	
1H	0	6.532	-1.890	-1.403	0.000	-0.096	-1.678	4	0.01	0.01	0.10	
1I	0	-13.545	-2.967	2.759	0.000	1.052	-0.519	3	0.02	0.02	0.22	
1J	0	-13.545	-2.071	2.759	0.000	1.052	-1.585	3	0.02	0.02	0.27	
1K	0	-13.545	-2.967	-2.826	0.000	-0.375	-0.519	4	0.02	0.02	0.13	
1L	0	-13.545	-2.071	-2.826	0.000	-0.375	-1.585	4	0.02	0.02	0.18	
1M	0	4.655	-2.967	2.759	0.000	1.052	-0.519	3	0.02	0.01	0.21	
1N	0	4.655	-2.071	2.759	0.000	1.052	-1.585	3	0.02	0.01	0.26	
1O	0	4.655	-2.967	-2.826	0.000	-0.375	-0.519	4	0.02	0.01	0.09	
1P	0	4.655	-2.071	-2.826	0.000	-0.375	-1.585	4	0.02	0.01	0.14	
2	0	0.411	-4.902	-0.096	0.000	0.623	-2.078	1	0.02	0.00	0.09	
7	0	-4.630	-4.379	-0.645	0.000	1.420	-0.853	3	0.01	0.01	0.29	
1A	57	-14.702	-4.419	1.336	0.000	-0.010	-2.143	4	0.01	0.03	0.14	
1B	57	-14.702	-3.161	1.336	0.000	-0.010	-3.586	4	0.01	0.03	0.20	
1C	57	-14.702	-4.419	-1.403	0.000	0.725	-2.143	3	0.01	0.02	0.24	
1D	57	-14.702	-3.161	-1.403	0.000	0.725	-3.586	3	0.01	0.02	0.30	
1E	57	7.253	-4.419	1.336	0.000	-0.010	-2.143	3	0.01	0.02	0.10	
1F	57	7.253	-3.161	1.336	0.000	-0.010	-3.586	1	0.01	0.02	0.09	
1G	57	7.253	-4.419	-1.403	0.000	0.725	-2.143	3	0.01	0.02	0.23	
1H	57	7.253	-3.161	-1.403	0.000	0.725	-3.586	1	0.01	0.02	0.15	
1I	57	-12.824	-4.238	2.759	0.000	-0.554	-2.240	4	0.02	0.02	0.23	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1J	57	-12.824	-3.342	2.759	0.000	-0.554	-3.490	4	0.02	0.02	0.28
1K	57	-12.824	-4.238	-2.826	0.000	1.269	-2.240	3	0.02	0.02	0.33
1L	57	-12.824	-3.342	-2.826	0.000	1.269	-3.490	3	0.02	0.02	0.38
1M	57	5.375	-4.238	2.759	0.000	-0.554	-2.240	4	0.02	0.01	0.20
1N	57	5.375	-3.342	2.759	0.000	-0.554	-3.490	4	0.02	0.01	0.25
1O	57	5.375	-4.238	-2.826	0.000	1.269	-2.240	1	0.02	0.01	0.15
1P	57	5.375	-3.342	-2.826	0.000	1.269	-3.490	1	0.02	0.01	0.18
2	57	1.755	-7.274	-0.096	0.000	0.678	-5.577	1	0.02	0.00	0.18
7	57	-3.286	-6.752	-0.645	0.000	1.790	-4.051	1	0.02	0.00	0.23
1A	115	-13.981	-5.690	1.336	0.000	-0.792	-4.591	4	0.02	0.02	0.38
1B	115	-13.981	-4.432	1.336	0.000	-0.792	-6.225	4	0.01	0.02	0.44
1C	115	-13.981	-5.690	-1.403	0.000	1.546	-4.591	3	0.02	0.02	0.48
1D	115	-13.981	-4.432	-1.403	0.000	1.546	-6.225	1	0.01	0.02	0.28
1E	115	7.973	-5.690	1.336	0.000	-0.792	-4.591	4	0.02	0.02	0.34
1F	115	7.973	-4.432	1.336	0.000	-0.792	-6.225	4	0.01	0.02	0.41
1G	115	7.973	-5.690	-1.403	0.000	1.546	-4.591	1	0.02	0.02	0.23
1H	115	7.973	-4.432	-1.403	0.000	1.546	-6.225	1	0.01	0.02	0.27
1I	115	-12.104	-5.509	2.759	0.000	-2.159	-4.691	4	0.02	0.02	0.61
1J	115	-12.104	-4.613	2.759	0.000	-2.159	-6.125	4	0.02	0.02	0.67
1K	115	-12.104	-5.509	-2.826	0.000	2.912	-4.691	1	0.02	0.02	0.34
1L	115	-12.104	-4.613	-2.826	0.000	2.912	-6.125	1	0.02	0.02	0.37
1M	115	6.096	-5.509	2.759	0.000	-2.159	-4.691	4	0.02	0.01	0.58
1N	115	6.096	-4.613	2.759	0.000	-2.159	-6.125	4	0.02	0.01	0.64
1O	115	6.096	-5.509	-2.826	0.000	2.912	-4.691	1	0.02	0.01	0.33
1P	115	6.096	-4.613	-2.826	0.000	2.912	-6.125	1	0.02	0.01	0.36
2	115	3.099	-9.647	-0.096	0.000	0.733	-10.440	1	0.03	0.01	0.30
7	115	-1.941	-9.124	-0.645	0.000	2.161	-8.613	1	0.03	0.00	0.36

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-15.422	-0.792	-4.591	4	0.6035	0.9715	1.0106	--	--	0.03	--	0.36	Snell.imin= 59
1B	-15.422	-0.792	-6.225	4	0.6035	0.9715	1.0139	--	--	0.03	--	0.43	Snell.imin= 59
1C	-15.422	1.546	-4.591	4	0.6035	1.0092	1.0106	--	--	0.03	--	0.50	Snell.imin= 59
1D	-15.422	1.546	-6.225	4	0.6035	1.0092	1.0139	--	--	0.03	--	0.57	Snell.imin= 59
1E	7.973	-0.792	-4.591	4	0.6035	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1F	7.973	-0.792	-6.225	4	0.6035	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1G	7.973	1.546	-4.591	4	0.6035	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1H	7.973	1.546	-6.225	4	0.6035	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1I	-13.545	-2.159	-4.691	4	0.6035	0.9927	1.0096	--	--	0.03	--	0.60	Snell.imin= 59
1J	-13.545	-2.159	-6.125	4	0.6035	0.9927	1.0120	--	--	0.03	--	0.66	Snell.imin= 59
1K	-13.545	2.912	-4.691	4	0.6035	1.0057	1.0096	--	--	0.03	--	0.74	Snell.imin= 59
1L	-13.545	2.912	-6.125	4	0.6035	1.0057	1.0120	--	--	0.03	--	0.80	Snell.imin= 59
1M	6.096	-2.159	-4.691	4	0.6035	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1N	6.096	-2.159	-6.125	4	0.6035	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1O	6.096	2.912	-4.691	4	0.6035	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
1P	6.096	2.912	-6.125	4	0.6035	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
2	3.099	0.733	-10.440	1	0.6035	0.0000	0.0000	--	--	--	--	--	Snell.imin= 59
7	-4.630	2.161	-8.613	3	0.6035	1.0117	1.0030	--	--	0.01	--	0.75	Snell.imin= 59

**ASTA NUM. 75** NI 134 NF 55 Lung. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-1.485	0.116	0.002	0.000	0.001	0.221	1	0.00	0.01	0.04	
1B	0	-1.485	0.187	0.002	0.000	0.001	-0.061	1	0.00	0.01	0.01	
1C	0	-1.485	0.116	-0.003	0.000	-0.001	0.221	1	0.00	0.01	0.04	
1D	0	-1.485	0.187	-0.003	0.000	-0.001	-0.061	1	0.00	0.01	0.01	
1E	0	4.005	0.116	0.002	0.000	0.001	0.221	1	0.00	0.02	0.04	
1F	0	4.005	0.187	0.002	0.000	0.001	-0.061	1	0.00	0.02	0.01	
1G	0	4.005	0.116	-0.003	0.000	-0.001	0.221	1	0.00	0.02	0.04	
1H	0	4.005	0.187	-0.003	0.000	-0.001	-0.061	1	0.00	0.02	0.01	
1I	0	-2.045	0.115	0.005	0.000	0.002	0.240	1	0.00	0.01	0.04	
1J	0	-2.045	0.188	0.005	0.000	0.002	-0.081	1	0.00	0.01	0.01	
1K	0	-2.045	0.115	-0.005	0.000	-0.002	0.240	1	0.00	0.01	0.04	
1L	0	-2.045	0.188	-0.005	0.000	-0.002	-0.081	1	0.00	0.01	0.01	
1M	0	4.565	0.115	0.005	0.000	0.002	0.240	1	0.00	0.02	0.04	
1N	0	4.565	0.188	0.005	0.000	0.002	-0.081	1	0.00	0.02	0.01	
1O	0	4.565	0.115	-0.005	0.000	-0.002	0.240	1	0.00	0.02	0.04	
1P	0	4.565	0.188	-0.005	0.000	-0.002	-0.081	1	0.00	0.02	0.01	
2	0	2.264	0.279	-0.001	0.000	-0.000	0.137	1	0.00	0.01	0.02	
7	0	8.223	0.215	-0.000	0.000	0.000	0.004	1	0.00	0.03	0.00	
1A	35	-1.485	0.088	0.002	0.000	-0.000	0.266	1	0.00	0.01	0.04	
1B	35	-1.485	0.159	0.002	0.000	-0.000	-0.009	1	0.00	0.01	0.00	
1C	35	-1.485	0.088	-0.003	0.000	0.000	0.266	1	0.00	0.01	0.04	
1D	35	-1.485	0.159	-0.003	0.000	0.000	-0.009	1	0.00	0.01	0.00	
1E	35	4.005	0.088	0.002	0.000	-0.000	0.266	1	0.00	0.02	0.04	
1F	35	4.005	0.159	0.002	0.000	-0.000	-0.009	1	0.00	0.02	0.00	
1G	35	4.005	0.088	-0.003	0.000	0.000	0.266	1	0.00	0.02	0.04	
1H	35	4.005	0.159	-0.003	0.000	0.000	-0.009	1	0.00	0.02	0.00	
1I	35	-2.045	0.087	0.005	0.000	-0.000	0.282	1	0.00	0.01	0.05	
1J	35	-2.045	0.160	0.005	0.000	-0.000	-0.025	1	0.00	0.01	0.00	
1K	35	-2.045	0.087	-0.005	0.000	0.000	0.282	1	0.00	0.01	0.05	
1L	35	-2.045	0.160	-0.005	0.000	0.000	-0.025	1	0.00	0.01	0.00	
1M	35	4.565	0.087	0.005	0.000	-0.000	0.282	1	0.00	0.02	0.05	
1N	35	4.565	0.160	0.005	0.000	-0.000	-0.025	1	0.00	0.02	0.00	
1O	35	4.565	0.087	-0.005	0.000	0.000	0.282	1	0.00	0.02	0.05	
1P	35	4.565	0.160	-0.005	0.000	0.000	-0.025	1	0.00	0.02	0.00	
2	35	2.265	0.243	-0.001	0.000	0.000	0.229	1	0.00	0.01	0.04	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

7	35	8.223	0.179	-0.000	0.000	0.000	0.073	1	0.00	0.03	0.01
1A	71	-1.485	0.060	0.002	0.000	-0.001	0.301	1	0.00	0.01	0.05
1B	71	-1.485	0.131	0.002	0.000	-0.001	0.033	1	0.00	0.01	0.01
1C	71	-1.485	0.060	-0.003	0.000	0.001	0.301	1	0.00	0.01	0.05
1D	71	-1.485	0.131	-0.003	0.000	0.001	0.033	1	0.00	0.01	0.01
1E	71	4.005	0.060	0.002	0.000	-0.001	0.301	1	0.00	0.02	0.05
1F	71	4.005	0.131	0.002	0.000	-0.001	0.033	1	0.00	0.02	0.01
1G	71	4.005	0.060	-0.003	0.000	0.001	0.301	1	0.00	0.02	0.05
1H	71	4.005	0.131	-0.003	0.000	0.001	0.033	1	0.00	0.02	0.01
1I	71	-2.045	0.059	0.005	0.000	-0.002	0.314	1	0.00	0.01	0.05
1J	71	-2.045	0.132	0.005	0.000	-0.002	0.021	1	0.00	0.01	0.00
1K	71	-2.045	0.059	-0.005	0.000	0.002	0.314	1	0.00	0.01	0.05
1L	71	-2.045	0.132	-0.005	0.000	0.002	0.021	1	0.00	0.01	0.00
1M	71	4.565	0.059	0.005	0.000	-0.002	0.314	1	0.00	0.02	0.05
1N	71	4.565	0.132	0.005	0.000	-0.002	0.021	1	0.00	0.02	0.00
1O	71	4.565	0.059	-0.005	0.000	0.002	0.314	1	0.00	0.02	0.05
1P	71	4.565	0.132	-0.005	0.000	0.002	0.021	1	0.00	0.02	0.00
2	71	2.265	0.207	-0.001	0.000	0.000	0.309	1	0.00	0.01	0.05
7	71	8.223	0.143	-0.000	0.000	0.000	0.130	1	0.00	0.03	0.02

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-1.485	-0.001	0.301	1	0.1121	0.9532	0.9993	--	--	0.05	--	0.11	Snell. 'zx'= 245
1B	-1.485	-0.001	-0.061	1	0.1121	0.9532	0.9966	--	--	0.05	--	0.07	Snell. 'zx'= 245
1C	-1.485	0.001	0.301	1	0.1121	0.9532	0.9993	--	--	0.05	--	0.11	Snell. 'zx'= 245
1D	-1.485	0.001	-0.061	1	0.1121	0.9532	0.9966	--	--	0.05	--	0.07	Snell. 'zx'= 245
1E	4.005	-0.001	0.301	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	4.005	-0.001	-0.061	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	4.005	0.001	0.301	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	4.005	0.001	-0.061	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-2.045	-0.002	0.314	1	0.1121	0.9356	0.9992	--	--	0.08	--	0.13	Snell. 'zx'= 245
1J	-2.045	-0.002	-0.081	1	0.1121	0.9356	0.9961	--	--	0.08	--	0.09	Snell. 'zx'= 245
1K	-2.045	0.002	0.314	1	0.1121	0.9356	0.9992	--	--	0.08	--	0.13	Snell. 'zx'= 245
1L	-2.045	0.002	-0.081	1	0.1121	0.9356	0.9961	--	--	0.08	--	0.09	Snell. 'zx'= 245
1M	4.565	-0.002	0.314	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	4.565	-0.002	-0.081	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	4.565	0.002	0.314	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	4.565	0.002	-0.081	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	2.265	0.000	0.309	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
7	8.223	0.000	0.130	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245

**ASTA NUM. 76** NI 134 NF 24 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-4.343	0.130	0.002	0.000	0.001	-0.052	1	0.00	0.02	0.01	
1B	0	-4.343	0.260	0.002	0.000	0.001	-0.356	1	0.00	0.02	0.06	
1C	0	-4.343	0.130	0.000	0.000	-0.000	-0.052	1	0.00	0.02	0.01	
1D	0	-4.343	0.260	0.000	0.000	-0.000	-0.356	1	0.00	0.02	0.06	
1E	0	1.321	0.130	0.002	0.000	0.001	-0.052	1	0.00	0.01	0.01	
1F	0	1.321	0.260	0.002	0.000	0.001	-0.356	1	0.00	0.01	0.06	
1G	0	1.321	0.130	0.000	0.000	-0.000	-0.052	1	0.00	0.01	0.01	
1H	0	1.321	0.260	0.000	0.000	-0.000	-0.356	1	0.00	0.01	0.06	
1I	0	-4.936	0.107	0.003	0.000	0.001	-0.028	1	0.00	0.02	0.00	
1J	0	-4.936	0.284	0.003	0.000	0.001	-0.380	1	0.00	0.02	0.06	
1K	0	-4.936	0.107	-0.001	0.000	-0.001	-0.028	1	0.00	0.02	0.00	
1L	0	-4.936	0.284	-0.001	0.000	-0.001	-0.380	1	0.00	0.02	0.06	
1M	0	1.914	0.107	0.003	0.000	0.001	-0.028	1	0.00	0.01	0.00	
1N	0	1.914	0.284	0.003	0.000	0.001	-0.380	1	0.00	0.01	0.06	
1O	0	1.914	0.107	-0.001	0.000	-0.001	-0.028	1	0.00	0.01	0.00	
1P	0	1.914	0.284	-0.001	0.000	-0.001	-0.380	1	0.00	0.01	0.06	
2	0	-2.737	0.408	0.002	0.000	0.000	-0.377	1	0.00	0.01	0.06	
7	0	-8.380	0.122	0.002	0.000	0.001	-0.162	1	0.00	0.03	0.03	
1A	35	-4.343	0.103	0.002	0.000	-0.000	-0.007	1	0.00	0.02	0.00	
1B	35	-4.343	0.232	0.002	0.000	-0.000	-0.273	1	0.00	0.02	0.04	
1C	35	-4.343	0.103	0.000	0.000	-0.000	-0.007	1	0.00	0.02	0.00	
1D	35	-4.343	0.232	0.000	0.000	-0.000	-0.273	1	0.00	0.02	0.04	
1E	35	1.322	0.103	0.002	0.000	-0.000	-0.007	1	0.00	0.01	0.00	
1F	35	1.322	0.232	0.002	0.000	-0.000	-0.273	1	0.00	0.01	0.04	
1G	35	1.322	0.103	0.000	0.000	-0.000	-0.007	1	0.00	0.01	0.00	
1H	35	1.322	0.232	0.000	0.000	-0.000	-0.273	1	0.00	0.01	0.04	
1I	35	-4.935	0.079	0.003	0.000	0.000	0.007	1	0.00	0.02	0.00	
1J	35	-4.935	0.256	0.003	0.000	0.000	-0.287	1	0.00	0.02	0.05	
1K	35	-4.935	0.079	-0.001	0.000	-0.000	0.007	1	0.00	0.02	0.00	
1L	35	-4.935	0.256	-0.001	0.000	-0.000	-0.287	1	0.00	0.02	0.05	
1M	35	1.914	0.079	0.003	0.000	0.000	0.007	1	0.00	0.01	0.00	
1N	35	1.914	0.256	0.003	0.000	0.000	-0.287	1	0.00	0.01	0.05	
1O	35	1.914	0.079	-0.001	0.000	-0.000	0.007	1	0.00	0.01	0.00	
1P	35	1.914	0.256	-0.001	0.000	-0.000	-0.287	1	0.00	0.01	0.05	
2	35	-2.737	0.372	0.002	0.000	-0.000	-0.239	1	0.00	0.01	0.04	
7	35	-8.380	0.086	0.002	0.000	-0.000	-0.125	1	0.00	0.03	0.02	
1A	71	-4.342	0.075	0.002	0.000	-0.001	0.028	1	0.00	0.02	0.00	
1B	71	-4.342	0.204	0.002	0.000	-0.001	-0.200	1	0.00	0.02	0.03	
1C	71	-4.342	0.075	0.000	0.000	-0.000	0.028	1	0.00	0.02	0.00	
1D	71	-4.342	0.204	0.000	0.000	-0.000	-0.200	1	0.00	0.02	0.03	
1E	71	1.322	0.075	0.002	0.000	-0.001	0.028	1	0.00	0.01	0.00	
1F	71	1.322	0.204	0.002	0.000	-0.001	-0.200	1	0.00	0.01	0.03	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1G	71	1.322	0.075	0.000	0.000	-0.000	0.028	1	0.00	0.01	0.00	
1H	71	1.322	0.204	0.000	0.000	-0.000	-0.200	1	0.00	0.01	0.03	
1I	71	-4.935	0.051	0.003	0.000	-0.001	0.032	1	0.00	0.02	0.01	
1J	71	-4.935	0.228	0.003	0.000	-0.001	-0.204	1	0.00	0.02	0.03	
1K	71	-4.935	0.051	-0.001	0.000	-0.000	0.032	1	0.00	0.02	0.01	
1L	71	-4.935	0.228	-0.001	0.000	-0.000	-0.204	1	0.00	0.02	0.03	
1M	71	1.915	0.051	0.003	0.000	-0.001	0.032	1	0.00	0.01	0.01	
1N	71	1.915	0.228	0.003	0.000	-0.001	-0.204	1	0.00	0.01	0.03	
1O	71	1.915	0.051	-0.001	0.000	-0.000	0.032	1	0.00	0.01	0.01	
1P	71	1.915	0.228	-0.001	0.000	-0.000	-0.204	1	0.00	0.01	0.03	
2	71	-2.736	0.336	0.002	0.000	-0.001	-0.114	1	0.00	0.01	0.02	
7	71	-8.379	0.050	0.002	0.000	-0.001	-0.101	1	0.00	0.03	0.02	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-4.343	-0.001	-0.052	1	0.1121	0.8633	0.9901	--	--	0.16	--	0.17	Snell. 'zx'= 245
1B	-4.343	-0.001	-0.356	1	0.1121	0.8633	0.9969	--	--	0.16	--	0.22	Snell. 'zx'= 245
1C	-4.343	-0.000	-0.052	1	0.1121	1.5000	0.9901	--	--	0.16	--	0.17	Snell. 'zx'= 245
1D	-4.343	-0.000	-0.356	1	0.1121	1.5000	0.9969	--	--	0.16	--	0.22	Snell. 'zx'= 245
1E	1.322	-0.001	-0.052	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	1.322	-0.001	-0.356	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	1.322	-0.000	-0.052	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	1.322	-0.000	-0.356	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-4.936	0.001	0.032	1	0.1121	0.8446	0.9866	--	--	0.18	--	0.19	Snell. 'zx'= 245
1J	-4.936	0.001	-0.380	1	0.1121	0.8446	0.9963	--	--	0.18	--	0.25	Snell. 'zx'= 245
1K	-4.936	-0.001	0.032	1	0.1121	1.1381	0.9866	--	--	0.18	--	0.19	Snell. 'zx'= 245
1L	-4.936	-0.001	-0.380	1	0.1121	1.1381	0.9963	--	--	0.18	--	0.24	Snell. 'zx'= 245
1M	1.915	0.001	0.032	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	1.915	0.001	-0.380	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	1.915	-0.001	0.032	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	1.915	-0.001	-0.380	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	-2.737	-0.001	-0.377	1	0.1121	0.9138	0.9970	--	--	0.10	--	0.16	Snell. 'zx'= 245
7	-8.380	-0.001	-0.162	1	0.1121	0.7362	0.9949	--	--	0.31	--	0.34	Snell. 'zx'= 245

**ASTA NUM. 77** NI 135 NF 107 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.

qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-2.258	0.181	0.002	0.000	0.000	-0.139	1	0.00	0.01	0.02	
1B	0	-2.258	0.301	0.002	0.000	0.000	-0.350	1	0.00	0.01	0.06	
1C	0	-2.258	0.181	-0.000	0.000	-0.000	-0.139	1	0.00	0.01	0.02	
1D	0	-2.258	0.301	-0.000	0.000	-0.000	-0.350	1	0.00	0.01	0.06	
1E	0	2.702	0.181	0.002	0.000	0.000	-0.139	1	0.00	0.01	0.02	
1F	0	2.702	0.301	0.002	0.000	0.000	-0.350	1	0.00	0.01	0.06	
1G	0	2.702	0.181	-0.000	0.000	-0.000	-0.139	1	0.00	0.01	0.02	
1H	0	2.702	0.301	-0.000	0.000	-0.000	-0.350	1	0.00	0.01	0.06	
1I	0	-2.559	0.172	0.002	0.000	0.001	-0.167	1	0.00	0.01	0.03	
1J	0	-2.559	0.309	0.002	0.000	0.001	-0.322	1	0.00	0.01	0.05	
1K	0	-2.559	0.172	-0.001	0.000	-0.001	-0.167	1	0.00	0.01	0.03	
1L	0	-2.559	0.309	-0.001	0.000	-0.001	-0.322	1	0.00	0.01	0.05	
1M	0	3.004	0.172	0.002	0.000	0.001	-0.167	1	0.00	0.01	0.03	
1N	0	3.004	0.309	0.002	0.000	0.001	-0.322	1	0.00	0.01	0.05	
1O	0	3.004	0.172	-0.001	0.000	-0.001	-0.167	1	0.00	0.01	0.03	
1P	0	3.004	0.309	-0.001	0.000	-0.001	-0.322	1	0.00	0.01	0.05	
2	0	0.508	0.512	0.001	0.000	0.000	-0.519	1	0.00	0.00	0.09	
7	0	-0.804	0.089	0.002	0.000	0.001	-0.158	1	0.00	0.00	0.03	
1A	35	-2.257	0.153	0.002	0.000	-0.000	-0.065	1	0.00	0.01	0.01	
1B	35	-2.257	0.274	0.002	0.000	-0.000	-0.264	1	0.00	0.01	0.04	
1C	35	-2.257	0.153	-0.000	0.000	-0.000	-0.065	1	0.00	0.01	0.01	
1D	35	-2.257	0.274	-0.000	0.000	-0.000	-0.264	1	0.00	0.01	0.04	
1E	35	2.702	0.153	0.002	0.000	-0.000	-0.065	1	0.00	0.01	0.01	
1F	35	2.702	0.274	0.002	0.000	-0.000	-0.264	1	0.00	0.01	0.04	
1G	35	2.702	0.153	-0.000	0.000	-0.000	-0.065	1	0.00	0.01	0.01	
1H	35	2.702	0.274	-0.000	0.000	-0.000	-0.264	1	0.00	0.01	0.04	
1I	35	-2.559	0.145	0.002	0.000	-0.000	-0.086	1	0.00	0.01	0.01	
1J	35	-2.559	0.282	0.002	0.000	-0.000	-0.243	1	0.00	0.01	0.04	
1K	35	-2.559	0.145	-0.001	0.000	-0.000	-0.086	1	0.00	0.01	0.01	
1L	35	-2.559	0.282	-0.001	0.000	-0.000	-0.243	1	0.00	0.01	0.04	
1M	35	3.004	0.145	0.002	0.000	-0.000	-0.086	1	0.00	0.01	0.01	
1N	35	3.004	0.282	0.002	0.000	-0.000	-0.243	1	0.00	0.01	0.04	
1O	35	3.004	0.145	-0.001	0.000	-0.000	-0.086	1	0.00	0.01	0.01	
1P	35	3.004	0.282	-0.001	0.000	-0.000	-0.243	1	0.00	0.01	0.04	
2	35	0.509	0.476	0.001	0.000	-0.000	-0.345	1	0.00	0.00	0.06	
7	35	-0.804	0.053	0.002	0.000	-0.000	-0.133	1	0.00	0.00	0.02	
1A	71	-2.257	0.125	0.002	0.000	-0.001	0.000	1	0.00	0.01	0.00	
1B	71	-2.257	0.246	0.002	0.000	-0.001	-0.188	1	0.00	0.01	0.03	
1C	71	-2.257	0.125	-0.000	0.000	-0.000	0.000	1	0.00	0.01	0.00	
1D	71	-2.257	0.246	-0.000	0.000	-0.000	-0.188	1	0.00	0.01	0.03	
1E	71	2.702	0.125	0.002	0.000	-0.001	0.000	1	0.00	0.01	0.00	
1F	71	2.702	0.246	0.002	0.000	-0.001	-0.188	1	0.00	0.01	0.03	
1G	71	2.702	0.125	-0.000	0.000	-0.000	0.000	1	0.00	0.01	0.00	
1H	71	2.702	0.246	-0.000	0.000	-0.000	-0.188	1	0.00	0.01	0.03	
1I	71	-2.559	0.117	0.002	0.000	-0.001	-0.015	1	0.00	0.01	0.00	
1J	71	-2.559	0.254	0.002	0.000	-0.001	-0.172	1	0.00	0.01	0.03	
1K	71	-2.559	0.117	-0.001	0.000	-0.000	-0.015	1	0.00	0.01	0.00	
1L	71	-2.559	0.254	-0.001	0.000	-0.000	-0.172	1	0.00	0.01	0.03	
1M	71	3.004	0.117	0.002	0.000	-0.001	-0.015	1	0.00	0.01	0.00	
1N	71	3.004	0.254	0.002	0.000	-0.001	-0.172	1	0.00	0.01	0.03	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

10	71	3.004	0.117	-0.001	0.000	-0.000	-0.015	1	0.00	0.01	0.00
1P	71	3.004	0.254	-0.001	0.000	-0.000	-0.172	1	0.00	0.01	0.03
2	71	0.509	0.440	0.001	0.000	-0.001	-0.183	1	0.00	0.00	0.03
7	71	-0.804	0.017	0.002	0.000	-0.001	-0.121	1	0.00	0.00	0.02

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN					kN*m							
1A	-2.258	-0.001	-0.139	1	0.1121	0.9289	0.9965	--	--	0.08	--	0.11	Snell. 'zx'= 245
1B	-2.258	-0.001	-0.350	1	0.1121	0.9289	0.9983	--	--	0.08	--	0.14	Snell. 'zx'= 245
1C	-2.258	-0.000	-0.139	1	0.1121	1.1248	0.9965	--	--	0.08	--	0.11	Snell. 'zx'= 245
1D	-2.258	-0.000	-0.350	1	0.1121	1.1248	0.9983	--	--	0.08	--	0.14	Snell. 'zx'= 245
1E	2.702	-0.001	-0.139	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	2.702	-0.001	-0.350	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	2.702	-0.000	-0.139	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	2.702	-0.000	-0.350	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-2.559	-0.001	-0.167	1	0.1121	0.9194	0.9964	--	--	0.09	--	0.12	Snell. 'zx'= 245
1J	-2.559	-0.001	-0.322	1	0.1121	0.9194	0.9981	--	--	0.09	--	0.15	Snell. 'zx'= 245
1K	-2.559	-0.001	-0.167	1	0.1121	1.1175	0.9964	--	--	0.09	--	0.12	Snell. 'zx'= 245
1L	-2.559	-0.001	-0.322	1	0.1121	1.1175	0.9981	--	--	0.09	--	0.15	Snell. 'zx'= 245
1M	3.004	-0.001	-0.167	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	3.004	-0.001	-0.322	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	3.004	-0.001	-0.167	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	3.004	-0.001	-0.322	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	0.509	-0.001	-0.519	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
7	-0.804	-0.001	-0.158	1	0.1121	0.9747	0.9997	--	--	0.03	--	0.06	Snell. 'zx'= 245

**ASTA NUM. 78** NI 135 NF 120 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-2.978	0.144	0.001	0.000	0.000	0.205	1	0.00	0.01	0.03	
1B	0	-2.978	0.201	0.001	0.000	0.000	-0.010	1	0.00	0.01	0.00	
1C	0	-2.978	0.144	-0.003	0.000	-0.001	0.205	1	0.00	0.01	0.03	
1D	0	-2.978	0.201	-0.003	0.000	-0.001	-0.010	1	0.00	0.01	0.00	
1E	0	2.465	0.144	0.001	0.000	0.000	0.205	1	0.00	0.01	0.03	
1F	0	2.465	0.201	0.001	0.000	0.000	-0.010	1	0.00	0.01	0.00	
1G	0	2.465	0.144	-0.003	0.000	-0.001	0.205	1	0.00	0.01	0.03	
1H	0	2.465	0.201	-0.003	0.000	-0.001	-0.010	1	0.00	0.01	0.00	
1I	0	-3.403	0.127	0.002	0.000	0.001	0.185	1	0.00	0.01	0.03	
1J	0	-3.403	0.217	0.002	0.000	0.001	0.010	1	0.00	0.01	0.00	
1K	0	-3.403	0.127	-0.004	0.000	-0.001	0.185	1	0.00	0.01	0.03	
1L	0	-3.403	0.217	-0.004	0.000	-0.001	0.010	1	0.00	0.01	0.00	
1M	0	2.890	0.127	0.002	0.000	0.001	0.185	1	0.00	0.01	0.03	
1N	0	2.890	0.217	0.002	0.000	0.001	0.010	1	0.00	0.01	0.00	
1O	0	2.890	0.127	-0.004	0.000	-0.001	0.185	1	0.00	0.01	0.03	
1P	0	2.890	0.217	-0.004	0.000	-0.001	0.010	1	0.00	0.01	0.00	
2	0	-0.580	0.327	-0.002	0.000	-0.001	0.221	1	0.00	0.00	0.04	
7	0	-0.370	0.190	0.003	0.000	0.001	0.030	1	0.00	0.00	0.00	
1A	35	-2.978	0.116	0.001	0.000	0.000	0.256	1	0.00	0.01	0.04	
1B	35	-2.978	0.173	0.001	0.000	0.000	0.050	1	0.00	0.01	0.01	
1C	35	-2.978	0.116	-0.003	0.000	0.000	0.256	1	0.00	0.01	0.04	
1D	35	-2.978	0.173	-0.003	0.000	0.000	0.050	1	0.00	0.01	0.01	
1E	35	2.465	0.116	0.001	0.000	0.000	0.256	1	0.00	0.01	0.04	
1F	35	2.465	0.173	0.001	0.000	0.000	0.050	1	0.00	0.01	0.01	
1G	35	2.465	0.116	-0.003	0.000	0.000	0.256	1	0.00	0.01	0.04	
1H	35	2.465	0.173	-0.003	0.000	0.000	0.050	1	0.00	0.01	0.01	
1I	35	-3.403	0.100	0.002	0.000	-0.000	0.234	1	0.00	0.01	0.04	
1J	35	-3.403	0.190	0.002	0.000	-0.000	0.073	1	0.00	0.01	0.01	
1K	35	-3.403	0.100	-0.004	0.000	0.000	0.234	1	0.00	0.01	0.04	
1L	35	-3.403	0.190	-0.004	0.000	0.000	0.073	1	0.00	0.01	0.01	
1M	35	2.891	0.100	0.002	0.000	-0.000	0.234	1	0.00	0.01	0.04	
1N	35	2.891	0.190	0.002	0.000	-0.000	0.073	1	0.00	0.01	0.01	
1O	35	2.891	0.100	-0.004	0.000	0.000	0.234	1	0.00	0.01	0.04	
1P	35	2.891	0.190	-0.004	0.000	0.000	0.073	1	0.00	0.01	0.01	
2	35	-0.580	0.291	-0.002	0.000	0.000	0.330	1	0.00	0.00	0.05	
7	35	-0.370	0.154	0.003	0.000	0.000	0.091	1	0.00	0.00	0.01	
1A	71	-2.978	0.088	0.001	0.000	-0.000	0.298	1	0.00	0.01	0.05	
1B	71	-2.978	0.146	0.001	0.000	-0.000	0.101	1	0.00	0.01	0.02	
1C	71	-2.978	0.088	-0.003	0.000	0.001	0.298	1	0.00	0.01	0.05	
1D	71	-2.978	0.146	-0.003	0.000	0.001	0.101	1	0.00	0.01	0.02	
1E	71	2.465	0.088	0.001	0.000	-0.000	0.298	1	0.00	0.01	0.05	
1F	71	2.465	0.146	0.001	0.000	-0.000	0.101	1	0.00	0.01	0.02	
1G	71	2.465	0.088	-0.003	0.000	0.001	0.298	1	0.00	0.01	0.05	
1H	71	2.465	0.146	-0.003	0.000	0.001	0.101	1	0.00	0.01	0.02	
1I	71	-3.403	0.072	0.002	0.000	-0.001	0.273	1	0.00	0.01	0.04	
1J	71	-3.403	0.162	0.002	0.000	-0.001	0.126	1	0.00	0.01	0.02	
1K	71	-3.403	0.072	-0.004	0.000	0.002	0.273	1	0.00	0.01	0.04	
1L	71	-3.403	0.162	-0.004	0.000	0.002	0.126	1	0.00	0.01	0.02	
1M	71	2.891	0.072	0.002	0.000	-0.001	0.273	1	0.00	0.01	0.04	
1N	71	2.891	0.162	0.002	0.000	-0.001	0.126	1	0.00	0.01	0.02	
1O	71	2.891	0.072	-0.004	0.000	0.002	0.273	1	0.00	0.01	0.04	
1P	71	2.891	0.162	-0.004	0.000	0.002	0.126	1	0.00	0.01	0.02	
2	71	-0.580	0.255	-0.002	0.000	0.001	0.426	1	0.00	0.00	0.07	
7	71	-0.370	0.118	0.003	0.000	-0.001	0.139	1	0.00	0.00	0.02	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-2.978	0.000	0.298	1	0.1121	0.9062	0.9985	--	--	0.11	--	0.16	Snell. 'zx'= 245
1B	-2.978	0.000	0.101	1	0.1121	0.9062	0.9950	--	--	0.11	--	0.13	Snell. 'zx'= 245
1C	-2.978	0.001	0.298	1	0.1121	0.9062	0.9985	--	--	0.11	--	0.16	Snell. 'zx'= 245
1D	-2.978	0.001	0.101	1	0.1121	0.9062	0.9950	--	--	0.11	--	0.13	Snell. 'zx'= 245
1E	2.465	0.000	0.298	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	2.465	0.000	0.101	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	2.465	0.001	0.298	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	2.465	0.001	0.101	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-3.403	-0.001	0.273	1	0.1121	0.8928	0.9982	--	--	0.13	--	0.17	Snell. 'zx'= 245
1J	-3.403	-0.001	0.126	1	0.1121	0.8928	0.9952	--	--	0.13	--	0.15	Snell. 'zx'= 245
1K	-3.403	0.002	0.273	1	0.1121	0.8928	0.9982	--	--	0.13	--	0.17	Snell. 'zx'= 245
1L	-3.403	0.002	0.126	1	0.1121	0.8928	0.9952	--	--	0.13	--	0.15	Snell. 'zx'= 245
1M	2.891	-0.001	0.273	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	2.891	-0.001	0.126	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	2.891	0.002	0.273	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	2.891	0.002	0.126	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	-0.580	0.001	0.426	1	0.1121	0.9817	0.9995	--	--	0.02	--	0.09	Snell. 'zx'= 245
7	-0.370	0.001	0.139	1	0.1121	0.9883	0.9995	--	--	0.01	--	0.04	Snell. 'zx'= 245

**ASTA NUM. 79** NI 136 NF 57 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.

qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-8.874	0.142	0.001	0.000	0.000	0.508	1	0.00	0.04	0.08	
1B	0	-8.874	0.190	0.001	0.000	0.000	0.254	1	0.00	0.04	0.04	
1C	0	-8.874	0.142	-0.004	0.000	-0.001	0.508	1	0.00	0.04	0.08	
1D	0	-8.874	0.190	-0.004	0.000	-0.001	0.254	1	0.00	0.04	0.04	
1E	0	1.074	0.142	0.001	0.000	0.000	0.508	1	0.00	0.00	0.08	
1F	0	1.074	0.190	0.001	0.000	0.000	0.254	1	0.00	0.00	0.04	
1G	0	1.074	0.142	-0.004	0.000	-0.001	0.508	1	0.00	0.00	0.08	
1H	0	1.074	0.190	-0.004	0.000	-0.001	0.254	1	0.00	0.00	0.04	
1I	0	-8.932	0.148	0.004	0.000	0.001	0.504	1	0.00	0.04	0.08	
1J	0	-8.932	0.184	0.004	0.000	0.001	0.259	1	0.00	0.04	0.04	
1K	0	-8.932	0.148	-0.008	0.000	-0.003	0.504	1	0.00	0.04	0.08	
1L	0	-8.932	0.184	-0.008	0.000	-0.003	0.259	1	0.00	0.04	0.04	
1M	0	1.132	0.148	0.004	0.000	0.001	0.504	1	0.00	0.00	0.08	
1N	0	1.132	0.184	0.004	0.000	0.001	0.259	1	0.00	0.00	0.04	
1O	0	1.132	0.148	-0.008	0.000	-0.003	0.504	1	0.00	0.00	0.08	
1P	0	1.132	0.184	-0.008	0.000	-0.003	0.259	1	0.00	0.00	0.04	
2	0	-5.369	0.302	-0.003	0.000	-0.001	0.724	1	0.00	0.02	0.12	
7	0	-7.051	0.294	-0.007	0.000	-0.002	0.481	1	0.00	0.03	0.08	
1A	35	-8.874	0.115	0.001	0.000	0.000	0.560	1	0.00	0.04	0.09	
1B	35	-8.874	0.162	0.001	0.000	0.000	0.310	1	0.00	0.04	0.05	
1C	35	-8.874	0.115	-0.004	0.000	0.000	0.560	1	0.00	0.04	0.09	
1D	35	-8.874	0.162	-0.004	0.000	0.000	0.310	1	0.00	0.04	0.05	
1E	35	1.074	0.115	0.001	0.000	0.000	0.560	1	0.00	0.00	0.09	
1F	35	1.074	0.162	0.001	0.000	0.000	0.310	1	0.00	0.00	0.05	
1G	35	1.074	0.115	-0.004	0.000	0.000	0.560	1	0.00	0.00	0.09	
1H	35	1.074	0.162	-0.004	0.000	0.000	0.310	1	0.00	0.00	0.05	
1I	35	-8.932	0.120	0.004	0.000	-0.000	0.557	1	0.00	0.04	0.09	
1J	35	-8.932	0.156	0.004	0.000	-0.000	0.313	1	0.00	0.04	0.05	
1K	35	-8.932	0.120	-0.008	0.000	0.000	0.557	1	0.00	0.04	0.09	
1L	35	-8.932	0.156	-0.008	0.000	0.000	0.313	1	0.00	0.04	0.05	
1M	35	1.132	0.120	0.004	0.000	-0.000	0.557	1	0.00	0.00	0.09	
1N	35	1.132	0.156	0.004	0.000	-0.000	0.313	1	0.00	0.00	0.05	
1O	35	1.132	0.120	-0.008	0.000	0.000	0.557	1	0.00	0.00	0.09	
1P	35	1.132	0.156	-0.008	0.000	0.000	0.313	1	0.00	0.00	0.05	
2	35	-5.369	0.266	-0.003	0.000	0.000	0.824	1	0.00	0.02	0.14	
7	35	-7.051	0.258	-0.007	0.000	0.000	0.578	1	0.00	0.03	0.10	
1A	71	-8.874	0.087	0.001	0.000	-0.000	0.602	1	0.00	0.04	0.10	
1B	71	-8.874	0.134	0.001	0.000	-0.000	0.357	1	0.00	0.04	0.06	
1C	71	-8.874	0.087	-0.004	0.000	0.002	0.602	1	0.00	0.04	0.10	
1D	71	-8.874	0.134	-0.004	0.000	0.002	0.357	1	0.00	0.04	0.06	
1E	71	1.074	0.087	0.001	0.000	-0.000	0.602	1	0.00	0.00	0.10	
1F	71	1.074	0.134	0.001	0.000	-0.000	0.357	1	0.00	0.00	0.06	
1G	71	1.074	0.087	-0.004	0.000	0.002	0.602	1	0.00	0.00	0.10	
1H	71	1.074	0.134	-0.004	0.000	0.002	0.357	1	0.00	0.00	0.06	
1I	71	-8.932	0.093	0.004	0.000	-0.001	0.601	1	0.00	0.04	0.10	
1J	71	-8.932	0.129	0.004	0.000	-0.001	0.357	1	0.00	0.04	0.06	
1K	71	-8.932	0.093	-0.008	0.000	0.003	0.601	1	0.00	0.04	0.10	
1L	71	-8.932	0.129	-0.008	0.000	0.003	0.357	1	0.00	0.04	0.06	
1M	71	1.132	0.093	0.004	0.000	-0.001	0.601	1	0.00	0.00	0.10	
1N	71	1.132	0.129	0.004	0.000	-0.001	0.357	1	0.00	0.00	0.06	
1O	71	1.132	0.093	-0.008	0.000	0.003	0.601	1	0.00	0.00	0.10	
1P	71	1.132	0.129	-0.008	0.000	0.003	0.357	1	0.00	0.00	0.06	
2	71	-5.368	0.230	-0.003	0.000	0.001	0.912	1	0.00	0.02	0.15	
7	71	-7.050	0.222	-0.007	0.000	0.003	0.663	1	0.00	0.03	0.11	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-8.874	0.000	0.602	1	0.1121	0.7206	0.9976	--	--	0.33	--	0.43	Snell. 'zx'= 245
1B	-8.874	0.000	0.357	1	0.1121	0.7206	0.9958	--	--	0.33	--	0.38	Snell. 'zx'= 245

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1C	-8.874	0.002	0.602	1	0.1121	0.7206	0.9976	--	--	0.33	--	0.43	Snell.	'zx'= 245
1D	-8.874	0.002	0.357	1	0.1121	0.7206	0.9958	--	--	0.33	--	0.39	Snell.	'zx'= 245
1E	1.074	0.000	0.602	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1F	1.074	0.000	0.357	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1G	1.074	0.002	0.602	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1H	1.074	0.002	0.357	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1I	-8.932	-0.001	0.601	1	0.1121	0.7188	0.9975	--	--	0.33	--	0.43	Snell.	'zx'= 245
1J	-8.932	-0.001	0.357	1	0.1121	0.7188	0.9959	--	--	0.33	--	0.39	Snell.	'zx'= 245
1K	-8.932	0.003	0.601	1	0.1121	0.7188	0.9975	--	--	0.33	--	0.43	Snell.	'zx'= 245
1L	-8.932	0.003	0.357	1	0.1121	0.7188	0.9959	--	--	0.33	--	0.39	Snell.	'zx'= 245
1M	1.132	-0.001	0.601	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1N	1.132	-0.001	0.357	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1O	1.132	0.003	0.601	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1P	1.132	0.003	0.357	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
2	-5.369	0.001	0.912	1	0.1121	0.8310	0.9981	--	--	0.20	--	0.35	Snell.	'zx'= 245
7	-7.051	0.003	0.663	1	0.1121	0.7780	0.9968	--	--	0.26	--	0.37	Snell.	'zx'= 245

ASTA NUM. 80 NI 136 NF 104 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m							
1A	0	-1.372	0.178	0.001	0.000	0.000	-0.437	1	0.00	0.01	0.07	
1B	0	-1.372	0.269	0.001	0.000	0.000	-0.705	1	0.00	0.01	0.12	
1C	0	-1.372	0.178	-0.001	0.000	-0.001	-0.437	1	0.00	0.01	0.07	
1D	0	-1.372	0.269	-0.001	0.000	-0.001	-0.705	1	0.00	0.01	0.12	
1E	0	6.312	0.178	0.001	0.000	0.000	-0.437	1	0.00	0.03	0.07	
1F	0	6.312	0.269	0.001	0.000	0.000	-0.705	1	0.00	0.03	0.12	
1G	0	6.312	0.178	-0.001	0.000	-0.001	-0.437	1	0.00	0.03	0.07	
1H	0	6.312	0.269	-0.001	0.000	-0.001	-0.705	1	0.00	0.03	0.12	
1I	0	-1.420	0.177	0.002	0.000	0.001	-0.437	1	0.00	0.01	0.07	
1J	0	-1.420	0.270	0.002	0.000	0.001	-0.705	1	0.00	0.01	0.12	
1K	0	-1.420	0.177	-0.003	0.000	-0.001	-0.437	1	0.00	0.01	0.07	
1L	0	-1.420	0.270	-0.003	0.000	-0.001	-0.705	1	0.00	0.01	0.12	
1M	0	6.360	0.177	0.002	0.000	0.001	-0.437	1	0.00	0.03	0.07	
1N	0	6.360	0.270	0.002	0.000	0.001	-0.705	1	0.00	0.03	0.12	
1O	0	6.360	0.177	-0.003	0.000	-0.001	-0.437	1	0.00	0.03	0.07	
1P	0	6.360	0.270	-0.003	0.000	-0.001	-0.705	1	0.00	0.03	0.12	
2	0	3.296	0.429	-0.001	0.000	-0.001	-1.084	1	0.00	0.01	0.18	
7	0	4.546	0.426	-0.002	0.000	-0.001	-0.802	1	0.00	0.02	0.13	
1A	35	-1.372	0.150	0.001	0.000	-0.000	-0.373	1	0.00	0.01	0.06	
1B	35	-1.372	0.241	0.001	0.000	-0.000	-0.621	1	0.00	0.01	0.10	
1C	35	-1.372	0.150	-0.001	0.000	-0.000	-0.373	1	0.00	0.01	0.06	
1D	35	-1.372	0.241	-0.001	0.000	-0.000	-0.621	1	0.00	0.01	0.10	
1E	35	6.312	0.150	0.001	0.000	-0.000	-0.373	1	0.00	0.03	0.06	
1F	35	6.312	0.241	0.001	0.000	-0.000	-0.621	1	0.00	0.03	0.10	
1G	35	6.312	0.150	-0.001	0.000	-0.000	-0.373	1	0.00	0.03	0.06	
1H	35	6.312	0.241	-0.001	0.000	-0.000	-0.621	1	0.00	0.03	0.10	
1I	35	-1.420	0.149	0.002	0.000	0.000	-0.373	1	0.00	0.01	0.06	
1J	35	-1.420	0.242	0.002	0.000	0.000	-0.622	1	0.00	0.01	0.10	
1K	35	-1.420	0.149	-0.003	0.000	-0.000	-0.373	1	0.00	0.01	0.06	
1L	35	-1.420	0.242	-0.003	0.000	-0.000	-0.622	1	0.00	0.01	0.10	
1M	35	6.360	0.149	0.002	0.000	0.000	-0.373	1	0.00	0.03	0.06	
1N	35	6.360	0.242	0.002	0.000	0.000	-0.622	1	0.00	0.03	0.10	
1O	35	6.360	0.149	-0.003	0.000	-0.000	-0.373	1	0.00	0.03	0.06	
1P	35	6.360	0.242	-0.003	0.000	-0.000	-0.622	1	0.00	0.03	0.10	
2	35	3.296	0.393	-0.001	0.000	-0.000	-0.939	1	0.00	0.01	0.15	
7	35	4.546	0.390	-0.002	0.000	-0.000	-0.657	1	0.00	0.02	0.11	
1A	71	-1.372	0.122	0.001	0.000	-0.000	-0.319	1	0.00	0.01	0.05	
1B	71	-1.372	0.213	0.001	0.000	-0.000	-0.547	1	0.00	0.01	0.09	
1C	71	-1.372	0.122	-0.001	0.000	0.000	-0.319	1	0.00	0.01	0.05	
1D	71	-1.372	0.213	-0.001	0.000	0.000	-0.547	1	0.00	0.01	0.09	
1E	71	6.312	0.122	0.001	0.000	-0.000	-0.319	1	0.00	0.03	0.05	
1F	71	6.312	0.213	0.001	0.000	-0.000	-0.547	1	0.00	0.03	0.09	
1G	71	6.312	0.122	-0.001	0.000	0.000	-0.319	1	0.00	0.03	0.05	
1H	71	6.312	0.213	-0.001	0.000	0.000	-0.547	1	0.00	0.03	0.09	
1I	71	-1.420	0.121	0.002	0.000	-0.000	-0.318	1	0.00	0.01	0.05	
1J	71	-1.420	0.215	0.002	0.000	-0.000	-0.548	1	0.00	0.01	0.09	
1K	71	-1.420	0.121	-0.003	0.000	0.000	-0.318	1	0.00	0.01	0.05	
1L	71	-1.420	0.215	-0.003	0.000	0.000	-0.548	1	0.00	0.01	0.09	
1M	71	6.360	0.121	0.002	0.000	-0.000	-0.318	1	0.00	0.03	0.05	
1N	71	6.360	0.215	0.002	0.000	-0.000	-0.548	1	0.00	0.03	0.09	
1O	71	6.360	0.121	-0.003	0.000	0.000	-0.318	1	0.00	0.03	0.05	
1P	71	6.360	0.215	-0.003	0.000	0.000	-0.548	1	0.00	0.03	0.09	
2	71	3.296	0.357	-0.001	0.000	0.000	-0.806	1	0.00	0.01	0.13	
7	71	4.546	0.354	-0.002	0.000	0.000	-0.526	1	0.00	0.02	0.09	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota	
--	kN													
	kN*m													
1A	-1.372	-0.000	-0.437	1	0.1121	0.9568	0.9994	--	--	0.05	--	0.12	Snell.	'zx'= 245
1B	-1.372	-0.000	-0.705	1	0.1121	0.9568	0.9995	--	--	0.05	--	0.17	Snell.	'zx'= 245
1C	-1.372	-0.001	-0.437	1	0.1121	0.9604	0.9994	--	--	0.05	--	0.12	Snell.	'zx'= 245
1D	-1.372	-0.001	-0.705	1	0.1121	0.9604	0.9995	--	--	0.05	--	0.17	Snell.	'zx'= 245
1E	6.312	-0.000	-0.437	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1F	6.312	-0.000	-0.705	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1G	6.312	-0.001	-0.437	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1H	6.312	-0.001	-0.705	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1I	-1.420	0.001	-0.437	1	0.1121	0.9553	0.9994	--	--	0.05	--	0.13	Snell.	'zx'= 245
1J	-1.420	0.001	-0.705	1	0.1121	0.9553	0.9995	--	--	0.05	--	0.17	Snell.	'zx'= 245

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1K	-1.420	-0.001	-0.437	1	0.1121	0.9704	0.9994	--	--	0.05	--	0.13	Snell.	'zx'= 245
1L	-1.420	-0.001	-0.705	1	0.1121	0.9704	0.9995	--	--	0.05	--	0.17	Snell.	'zx'= 245
1M	6.360	0.001	-0.437	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1N	6.360	0.001	-0.705	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1O	6.360	-0.001	-0.437	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1P	6.360	-0.001	-0.705	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
2	3.296	-0.001	-1.084	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
7	4.546	-0.001	-0.802	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245

**ASTA NUM. 81** NI 137 NF 124 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.

qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m			--	--	--	--	--
1A	0	-1.089	-0.546	0.001	0.000	0.000	0.550	1	0.00	0.00	0.09	
1B	0	-1.089	-0.377	0.001	0.000	0.000	0.292	1	0.00	0.00	0.05	
1C	0	-1.089	-0.546	-0.000	0.000	-0.000	0.550	1	0.00	0.00	0.09	
1D	0	-1.089	-0.377	-0.000	0.000	-0.000	0.292	1	0.00	0.00	0.05	
1E	0	5.659	-0.546	0.001	0.000	0.000	0.550	1	0.00	0.02	0.09	
1F	0	5.659	-0.377	0.001	0.000	0.000	0.292	1	0.00	0.02	0.05	
1G	0	5.659	-0.546	-0.000	0.000	-0.000	0.550	1	0.00	0.02	0.09	
1H	0	5.659	-0.377	-0.000	0.000	-0.000	0.292	1	0.00	0.02	0.05	
1I	0	0.154	-0.546	0.001	0.000	0.000	0.555	1	0.00	0.00	0.09	
1J	0	0.154	-0.377	0.001	0.000	0.000	0.287	1	0.00	0.00	0.05	
1K	0	0.154	-0.546	-0.000	0.000	-0.000	0.555	1	0.00	0.00	0.09	
1L	0	0.154	-0.377	-0.000	0.000	-0.000	0.287	1	0.00	0.00	0.05	
1M	0	4.417	-0.546	0.001	0.000	0.000	0.555	1	0.00	0.02	0.09	
1N	0	4.417	-0.377	0.001	0.000	0.000	0.287	1	0.00	0.02	0.05	
1O	0	4.417	-0.546	-0.000	0.000	-0.000	0.555	1	0.00	0.02	0.09	
1P	0	4.417	-0.377	-0.000	0.000	-0.000	0.287	1	0.00	0.02	0.05	
2	0	3.246	-0.865	0.000	0.000	-0.000	0.798	1	0.01	0.01	0.13	
7	0	1.932	-0.892	0.000	0.000	-0.000	0.592	1	0.01	0.01	0.10	
1A	35	-1.088	-0.574	0.001	0.000	-0.000	0.359	1	0.00	0.00	0.06	
1B	35	-1.088	-0.405	0.001	0.000	-0.000	0.147	1	0.00	0.00	0.02	
1C	35	-1.088	-0.574	-0.000	0.000	-0.000	0.359	1	0.00	0.00	0.06	
1D	35	-1.088	-0.405	-0.000	0.000	-0.000	0.147	1	0.00	0.00	0.02	
1E	35	5.660	-0.574	0.001	0.000	-0.000	0.359	1	0.00	0.02	0.06	
1F	35	5.660	-0.405	0.001	0.000	-0.000	0.147	1	0.00	0.02	0.02	
1G	35	5.660	-0.574	-0.000	0.000	-0.000	0.359	1	0.00	0.02	0.06	
1H	35	5.660	-0.405	-0.000	0.000	-0.000	0.147	1	0.00	0.02	0.02	
1I	35	0.154	-0.574	0.001	0.000	-0.000	0.364	1	0.00	0.00	0.06	
1J	35	0.154	-0.405	0.001	0.000	-0.000	0.142	1	0.00	0.00	0.02	
1K	35	0.154	-0.574	-0.000	0.000	-0.000	0.364	1	0.00	0.00	0.06	
1L	35	0.154	-0.405	-0.000	0.000	-0.000	0.142	1	0.00	0.00	0.02	
1M	35	4.417	-0.574	0.001	0.000	-0.000	0.364	1	0.00	0.02	0.06	
1N	35	4.417	-0.405	0.001	0.000	-0.000	0.142	1	0.00	0.02	0.02	
1O	35	4.417	-0.574	-0.000	0.000	-0.000	0.364	1	0.00	0.02	0.06	
1P	35	4.417	-0.405	-0.000	0.000	-0.000	0.142	1	0.00	0.02	0.02	
2	35	3.246	-0.901	0.000	0.000	-0.000	0.486	1	0.01	0.01	0.08	
7	35	1.932	-0.928	0.000	0.000	-0.000	0.270	1	0.01	0.01	0.04	
1A	71	-1.088	-0.602	0.001	0.000	-0.000	0.158	1	0.00	0.00	0.03	
1B	71	-1.088	-0.432	0.001	0.000	-0.000	-0.008	1	0.00	0.00	0.00	
1C	71	-1.088	-0.602	-0.000	0.000	0.000	0.158	1	0.00	0.00	0.03	
1D	71	-1.088	-0.432	-0.000	0.000	0.000	-0.008	1	0.00	0.00	0.00	
1E	71	5.660	-0.602	0.001	0.000	-0.000	0.158	1	0.00	0.02	0.03	
1F	71	5.660	-0.432	0.001	0.000	-0.000	-0.008	1	0.00	0.02	0.00	
1G	71	5.660	-0.602	-0.000	0.000	0.000	0.158	1	0.00	0.02	0.03	
1H	71	5.660	-0.432	-0.000	0.000	0.000	-0.008	1	0.00	0.02	0.00	
1I	71	0.155	-0.601	0.001	0.000	-0.000	0.163	1	0.00	0.00	0.03	
1J	71	0.155	-0.433	0.001	0.000	-0.000	-0.013	1	0.00	0.00	0.00	
1K	71	0.155	-0.601	-0.000	0.000	0.000	0.163	1	0.00	0.00	0.03	
1L	71	0.155	-0.433	-0.000	0.000	0.000	-0.013	1	0.00	0.00	0.00	
1M	71	4.418	-0.601	0.001	0.000	-0.000	0.163	1	0.00	0.02	0.03	
1N	71	4.418	-0.433	0.001	0.000	-0.000	-0.013	1	0.00	0.02	0.00	
1O	71	4.418	-0.601	-0.000	0.000	0.000	0.163	1	0.00	0.02	0.03	
1P	71	4.418	-0.433	-0.000	0.000	0.000	-0.013	1	0.00	0.02	0.00	
2	71	3.246	-0.937	0.000	0.000	-0.000	0.162	1	0.01	0.01	0.03	
7	71	1.932	-0.964	0.000	0.000	-0.000	-0.064	1	0.01	0.01	0.01	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	k <sub>LT</sub>	χ <sub>LT</sub>	I.S.n.	I.S.m.	I.S.	Nota	
--	kN		kN*m		--	--	--	--	--	--	--	--	--	
1A	-1.089	-0.000	0.550	1	0.1121	0.9952	0.9988	--	--	0.04	--	0.13	Snell.	'zx'= 245
1B	-1.089	-0.000	0.292	1	0.1121	0.9952	0.9982	--	--	0.04	--	0.09	Snell.	'zx'= 245
1C	-1.089	-0.000	0.550	1	0.1121	0.9657	0.9988	--	--	0.04	--	0.13	Snell.	'zx'= 245
1D	-1.089	-0.000	0.292	1	0.1121	0.9657	0.9982	--	--	0.04	--	0.09	Snell.	'zx'= 245
1E	5.660	-0.000	0.550	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1F	5.660	-0.000	0.292	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1G	5.660	-0.000	0.550	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1H	5.660	-0.000	0.292	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1I	0.155	-0.000	0.555	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1J	0.155	-0.000	0.287	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1K	0.155	-0.000	0.555	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1L	0.155	-0.000	0.287	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1M	4.418	-0.000	0.555	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1N	4.418	-0.000	0.287	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1O	4.418	-0.000	0.555	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
1P	4.418	-0.000	0.287	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
2	3.246	-0.000	0.799	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245
7	1.932	-0.000	0.591	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell.	'zx'= 245

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

ASTA NUM. 82 NI 137 NF 126 Lungh. 70.7 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y Permanente Congresso qy tot.  
qy medio: 0.08 1.13 4.00 5.20 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	kN			kN*m			--	--	--	--	--
cm	cm											
1A	0	-6.269	0.494	0.000	0.000	0.000	-0.139	1	0.00	0.03	0.02	
1B	0	-6.269	0.583	0.000	0.000	0.000	-0.359	1	0.00	0.03	0.06	
1C	0	-6.269	0.494	-0.001	0.000	-0.000	-0.139	1	0.00	0.03	0.02	
1D	0	-6.269	0.583	-0.001	0.000	-0.000	-0.359	1	0.00	0.03	0.06	
1E	0	1.937	0.494	0.000	0.000	0.000	-0.139	1	0.00	0.01	0.02	
1F	0	1.937	0.583	0.000	0.000	0.000	-0.359	1	0.00	0.01	0.06	
1G	0	1.937	0.494	-0.001	0.000	-0.000	-0.139	1	0.00	0.01	0.02	
1H	0	1.937	0.583	-0.001	0.000	-0.000	-0.359	1	0.00	0.01	0.06	
1I	0	-5.081	0.497	0.000	0.000	0.000	-0.139	1	0.00	0.02	0.02	
1J	0	-5.081	0.580	0.000	0.000	0.000	-0.359	1	0.00	0.02	0.06	
1K	0	-5.081	0.497	-0.001	0.000	-0.000	-0.139	1	0.00	0.02	0.02	
1L	0	-5.081	0.580	-0.001	0.000	-0.000	-0.359	1	0.00	0.02	0.06	
1M	0	0.749	0.497	0.000	0.000	0.000	-0.139	1	0.00	0.00	0.02	
1N	0	0.749	0.580	0.000	0.000	0.000	-0.359	1	0.00	0.00	0.06	
1O	0	0.749	0.497	-0.001	0.000	-0.000	-0.139	1	0.00	0.00	0.02	
1P	0	0.749	0.580	-0.001	0.000	-0.000	-0.359	1	0.00	0.00	0.06	
2	0	-2.942	1.019	-0.000	0.000	-0.000	-0.469	1	0.01	0.01	0.08	
7	0	-0.138	0.934	-0.001	0.000	-0.000	-0.234	1	0.01	0.00	0.04	
1A	35	-6.269	-0.356	0.000	0.000	0.000	-0.094	1	0.00	0.03	0.02	
1B	35	-6.269	-0.266	0.000	0.000	0.000	-0.324	1	0.00	0.03	0.05	
1C	35	-6.269	-0.356	-0.001	0.000	-0.000	-0.094	1	0.00	0.03	0.02	
1D	35	-6.269	-0.266	-0.001	0.000	-0.000	-0.324	1	0.00	0.03	0.05	
1E	35	1.937	-0.356	0.000	0.000	0.000	-0.094	1	0.00	0.01	0.02	
1F	35	1.937	-0.266	0.000	0.000	0.000	-0.324	1	0.00	0.01	0.05	
1G	35	1.937	-0.356	-0.001	0.000	-0.000	-0.094	1	0.00	0.01	0.02	
1H	35	1.937	-0.266	-0.001	0.000	-0.000	-0.324	1	0.00	0.01	0.05	
1I	35	-5.081	-0.353	0.000	0.000	0.000	-0.092	1	0.00	0.02	0.02	
1J	35	-5.081	-0.269	0.000	0.000	0.000	-0.325	1	0.00	0.02	0.05	
1K	35	-5.081	-0.353	-0.001	0.000	-0.000	-0.092	1	0.00	0.02	0.02	
1L	35	-5.081	-0.269	-0.001	0.000	-0.000	-0.325	1	0.00	0.02	0.05	
1M	35	0.749	-0.353	0.000	0.000	0.000	-0.092	1	0.00	0.00	0.02	
1N	35	0.749	-0.269	0.000	0.000	0.000	-0.325	1	0.00	0.00	0.05	
1O	35	0.749	-0.353	-0.001	0.000	-0.000	-0.092	1	0.00	0.00	0.02	
1P	35	0.749	-0.269	-0.001	0.000	-0.000	-0.325	1	0.00	0.00	0.05	
2	35	-2.941	-0.594	-0.000	0.000	-0.000	-0.394	1	0.00	0.01	0.06	
7	35	-0.137	-0.679	-0.001	0.000	-0.000	-0.189	1	0.00	0.00	0.03	
1A	71	-6.269	-1.205	0.000	0.000	-0.000	-0.350	1	0.01	0.03	0.06	
1B	71	-6.269	-1.115	0.000	0.000	-0.000	-0.588	1	0.01	0.03	0.10	
1C	71	-6.269	-1.205	-0.001	0.000	0.000	-0.350	1	0.01	0.03	0.06	
1D	71	-6.269	-1.115	-0.001	0.000	0.000	-0.588	1	0.01	0.03	0.10	
1E	71	1.937	-1.205	0.000	0.000	-0.000	-0.350	1	0.01	0.01	0.06	
1F	71	1.937	-1.115	0.000	0.000	-0.000	-0.588	1	0.01	0.01	0.10	
1G	71	1.937	-1.205	-0.001	0.000	0.000	-0.350	1	0.01	0.01	0.06	
1H	71	1.937	-1.115	-0.001	0.000	0.000	-0.588	1	0.01	0.01	0.10	
1I	71	-5.081	-1.202	0.000	0.000	-0.000	-0.346	1	0.01	0.02	0.06	
1J	71	-5.081	-1.118	0.000	0.000	-0.000	-0.592	1	0.01	0.02	0.10	
1K	71	-5.081	-1.202	-0.001	0.000	0.000	-0.346	1	0.01	0.02	0.06	
1L	71	-5.081	-1.118	-0.001	0.000	0.000	-0.592	1	0.01	0.02	0.10	
1M	71	0.749	-1.202	0.000	0.000	-0.000	-0.346	1	0.01	0.00	0.06	
1N	71	0.749	-1.118	0.000	0.000	-0.000	-0.592	1	0.01	0.00	0.10	
1O	71	0.749	-1.202	-0.001	0.000	0.000	-0.346	1	0.01	0.00	0.06	
1P	71	0.749	-1.118	-0.001	0.000	0.000	-0.592	1	0.01	0.00	0.10	
2	71	-2.941	-2.207	-0.000	0.000	0.000	-0.889	1	0.02	0.01	0.15	
7	71	-0.137	-2.292	-0.001	0.000	0.000	-0.714	1	0.02	0.00	0.12	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
--	kN		kN*m		--	--	--	--	--	--	--	--	--
1A	-6.269	0.000	-0.350	1	0.1121	1.5000	0.9965	--	--	0.23	--	0.29	Snell. 'zx'= 245
1B	-6.269	0.000	-0.588	1	0.1121	1.5000	0.9965	--	--	0.23	--	0.33	Snell. 'zx'= 245
1C	-6.269	-0.000	-0.350	1	0.1121	0.8026	0.9965	--	--	0.23	--	0.29	Snell. 'zx'= 245
1D	-6.269	-0.000	-0.588	1	0.1121	0.8026	0.9965	--	--	0.23	--	0.33	Snell. 'zx'= 245
1E	1.937	0.000	-0.350	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1F	1.937	0.000	-0.588	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1G	1.937	-0.000	-0.350	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1H	1.937	-0.000	-0.588	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1I	-5.081	0.000	-0.346	1	0.1121	1.5000	0.9972	--	--	0.19	--	0.24	Snell. 'zx'= 245
1J	-5.081	0.000	-0.592	1	0.1121	1.5000	0.9971	--	--	0.19	--	0.28	Snell. 'zx'= 245
1K	-5.081	-0.000	-0.346	1	0.1121	0.8400	0.9972	--	--	0.19	--	0.24	Snell. 'zx'= 245
1L	-5.081	-0.000	-0.592	1	0.1121	0.8400	0.9971	--	--	0.19	--	0.28	Snell. 'zx'= 245
1M	0.749	0.000	-0.346	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1N	0.749	0.000	-0.592	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1O	0.749	-0.000	-0.346	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
1P	0.749	-0.000	-0.592	1	0.1121	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 245
2	-2.942	-0.000	-0.889	1	0.1121	0.9230	0.9980	--	--	0.11	--	0.25	Snell. 'zx'= 245
7	-0.138	-0.000	-0.714	1	0.1121	0.9957	0.9999	--	--	0.01	--	0.12	Snell. 'zx'= 245

ASTA NUM. 83 NI 138 NF 81 Lungh. 72.0 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
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# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

		-----			-----			-----			
	cm	kN			kN*m						
1A	0	-1.983	-0.582	0.001	0.000	0.000	0.201	1	0.00	0.01	0.03
1B	0	-1.983	-0.329	0.001	0.000	0.000	0.035	1	0.00	0.01	0.01
1C	0	-1.983	-0.582	-0.002	0.000	-0.001	0.201	1	0.00	0.01	0.03
1D	0	-1.983	-0.329	-0.002	0.000	-0.001	0.035	1	0.00	0.01	0.01
1E	0	3.216	-0.582	0.001	0.000	0.000	0.201	1	0.00	0.01	0.03
1F	0	3.216	-0.329	0.001	0.000	0.000	0.035	1	0.00	0.01	0.01
1G	0	3.216	-0.582	-0.002	0.000	-0.001	0.201	1	0.00	0.01	0.03
1H	0	3.216	-0.329	-0.002	0.000	-0.001	0.035	1	0.00	0.01	0.01
1I	0	-1.993	-0.652	0.001	0.000	0.000	0.187	1	0.00	0.01	0.03
1J	0	-1.993	-0.260	0.001	0.000	0.000	0.049	1	0.00	0.01	0.01
1K	0	-1.993	-0.652	-0.003	0.000	-0.001	0.187	1	0.00	0.01	0.03
1L	0	-1.993	-0.260	-0.003	0.000	-0.001	0.049	1	0.00	0.01	0.01
1M	0	3.226	-0.652	0.001	0.000	0.000	0.187	1	0.00	0.01	0.03
1N	0	3.226	-0.260	0.001	0.000	0.000	0.049	1	0.00	0.01	0.01
1O	0	3.226	-0.652	-0.003	0.000	-0.001	0.187	1	0.00	0.01	0.03
1P	0	3.226	-0.260	-0.003	0.000	-0.001	0.049	1	0.00	0.01	0.01
2	0	1.586	-0.877	0.000	0.000	-0.000	0.223	1	0.01	0.01	0.04
7	0	-2.145	-0.712	-0.000	0.000	-0.000	0.159	1	0.01	0.01	0.03
-----											
1A	36	-1.983	-0.610	0.001	0.000	-0.000	0.039	1	0.00	0.01	0.01
1B	36	-1.983	-0.357	0.001	0.000	-0.000	-0.141	1	0.00	0.01	0.02
1C	36	-1.983	-0.610	-0.002	0.000	0.000	0.039	1	0.00	0.01	0.01
1D	36	-1.983	-0.357	-0.002	0.000	0.000	-0.141	1	0.00	0.01	0.02
1E	36	3.216	-0.610	0.001	0.000	-0.000	0.039	1	0.00	0.01	0.01
1F	36	3.216	-0.357	0.001	0.000	-0.000	-0.141	1	0.00	0.01	0.02
1G	36	3.216	-0.610	-0.002	0.000	0.000	0.039	1	0.00	0.01	0.01
1H	36	3.216	-0.357	-0.002	0.000	0.000	-0.141	1	0.00	0.01	0.02
1I	36	-1.993	-0.679	0.001	0.000	-0.000	-0.077	1	0.00	0.01	0.01
1J	36	-1.993	-0.287	0.001	0.000	-0.000	-0.025	1	0.00	0.01	0.00
1K	36	-1.993	-0.679	-0.003	0.000	0.000	-0.077	1	0.00	0.01	0.01
1L	36	-1.993	-0.287	-0.003	0.000	0.000	-0.025	1	0.00	0.01	0.00
1M	36	3.226	-0.679	0.001	0.000	-0.000	-0.077	1	0.00	0.01	0.01
1N	36	3.226	-0.287	0.001	0.000	-0.000	-0.025	1	0.00	0.01	0.00
1O	36	3.226	-0.679	-0.003	0.000	0.000	-0.077	1	0.00	0.01	0.01
1P	36	3.226	-0.287	-0.003	0.000	0.000	-0.025	1	0.00	0.01	0.00
2	36	1.586	-0.913	0.000	0.000	-0.000	-0.099	1	0.01	0.01	0.02
7	36	-2.145	-0.748	-0.000	0.000	-0.000	-0.104	1	0.01	0.01	0.02
-----											
1A	72	-1.983	-0.638	0.001	0.000	-0.001	-0.133	1	0.00	0.01	0.02
1B	72	-1.983	-0.385	0.001	0.000	-0.001	-0.327	1	0.00	0.01	0.05
1C	72	-1.983	-0.638	-0.002	0.000	0.001	-0.133	1	0.00	0.01	0.02
1D	72	-1.983	-0.385	-0.002	0.000	0.001	-0.327	1	0.00	0.01	0.05
1E	72	3.216	-0.638	0.001	0.000	-0.001	-0.133	1	0.00	0.01	0.02
1F	72	3.216	-0.385	0.001	0.000	-0.001	-0.327	1	0.00	0.01	0.05
1G	72	3.216	-0.638	-0.002	0.000	0.001	-0.133	1	0.00	0.01	0.02
1H	72	3.216	-0.385	-0.002	0.000	0.001	-0.327	1	0.00	0.01	0.05
1I	72	-1.993	-0.707	0.001	0.000	-0.001	-0.351	1	0.01	0.01	0.06
1J	72	-1.993	-0.315	0.001	0.000	-0.001	-0.109	1	0.00	0.01	0.02
1K	72	-1.993	-0.707	-0.003	0.000	0.001	-0.351	1	0.01	0.01	0.06
1L	72	-1.993	-0.315	-0.003	0.000	0.001	-0.109	1	0.00	0.01	0.02
1M	72	3.227	-0.707	0.001	0.000	-0.001	-0.351	1	0.01	0.01	0.06
1N	72	3.227	-0.315	0.001	0.000	-0.001	-0.109	1	0.00	0.01	0.02
1O	72	3.227	-0.707	-0.003	0.000	0.001	-0.351	1	0.01	0.01	0.06
1P	72	3.227	-0.315	-0.003	0.000	0.001	-0.109	1	0.00	0.01	0.02
2	72	1.586	-0.949	0.000	0.000	-0.000	-0.435	1	0.01	0.01	0.07
7	72	-2.144	-0.784	-0.000	0.000	0.000	-0.380	1	0.01	0.01	0.06

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	kLT	χLT	I.S.n.	I.S.m.	I.S.	Nota
	-----	-----	-----										
	kN	kN*m											
1A	-1.983	-0.001	0.201	1	0.1083	0.9354	0.9948	--	--	0.08	--	0.11	Snell. 'zx'= 250
1B	-1.983	-0.001	-0.327	1	0.1083	0.9354	0.9966	--	--	0.08	--	0.13	Snell. 'zx'= 250
1C	-1.983	0.001	0.201	1	0.1083	0.9354	0.9948	--	--	0.08	--	0.11	Snell. 'zx'= 250
1D	-1.983	0.001	-0.327	1	0.1083	0.9354	0.9966	--	--	0.08	--	0.13	Snell. 'zx'= 250
1E	3.216	-0.001	0.201	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1F	3.216	-0.001	-0.327	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1G	3.216	0.001	0.201	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1H	3.216	0.001	-0.327	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1I	-1.993	-0.001	-0.351	1	0.1083	0.9350	0.9952	--	--	0.08	--	0.13	Snell. 'zx'= 250
1J	-1.993	-0.001	-0.109	1	0.1083	0.9350	0.9956	--	--	0.08	--	0.09	Snell. 'zx'= 250
1K	-1.993	0.001	-0.351	1	0.1083	0.9350	0.9952	--	--	0.08	--	0.14	Snell. 'zx'= 250
1L	-1.993	0.001	-0.109	1	0.1083	0.9350	0.9956	--	--	0.08	--	0.10	Snell. 'zx'= 250
1M	3.227	-0.001	-0.351	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1N	3.227	-0.001	-0.109	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1O	3.227	0.001	-0.351	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1P	3.227	0.001	-0.109	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
2	1.586	-0.000	-0.435	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
7	-2.145	-0.000	-0.380	1	0.1083	0.9301	0.9952	--	--	0.08	--	0.14	Snell. 'zx'= 250

**ASTA NUM. 84** NI 138 NF 80 Lunghezza 72.0 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	-----	-----	-----	-----	-----	-----	-----					
	cm	kN			kN*m							
1A	0	-3.496	-0.115	0.002	0.000	0.001	-0.169	1	0.00	0.01	0.03	
1B	0	-3.496	0.076	0.002	0.000	0.001	-0.350	1	0.00	0.01	0.06	
1C	0	-3.496	-0.115	0.000	0.000	0.000	-0.169	1	0.00	0.01	0.03	
1D	0	-3.496	0.076	0.000	0.000	0.000	-0.350	1	0.00	0.01	0.06	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1E	0	1.504	-0.115	0.002	0.000	0.001	-0.169	1	0.00	0.01	0.03
1F	0	1.504	0.076	0.002	0.000	0.001	-0.350	1	0.00	0.01	0.06
1G	0	1.504	-0.115	0.000	0.000	0.000	-0.169	1	0.00	0.01	0.03
1H	0	1.504	0.076	0.000	0.000	0.000	-0.350	1	0.00	0.01	0.06
1I	0	-3.756	-0.149	0.004	0.000	0.001	-0.163	1	0.00	0.02	0.03
1J	0	-3.756	0.111	0.004	0.000	0.001	-0.356	1	0.00	0.02	0.06
1K	0	-3.756	-0.149	-0.001	0.000	-0.000	-0.163	1	0.00	0.02	0.03
1L	0	-3.756	0.111	-0.001	0.000	-0.000	-0.356	1	0.00	0.02	0.06
1M	0	1.764	-0.149	0.004	0.000	0.001	-0.163	1	0.00	0.01	0.03
1N	0	1.764	0.111	0.004	0.000	0.001	-0.356	1	0.00	0.01	0.06
1O	0	1.764	-0.149	-0.001	0.000	-0.000	-0.163	1	0.00	0.01	0.03
1P	0	1.764	0.111	-0.001	0.000	-0.000	-0.356	1	0.00	0.01	0.06
2	0	-1.933	-0.027	0.002	0.000	0.000	-0.494	1	0.00	0.01	0.08
7	0	1.750	-0.121	0.004	0.000	0.001	-0.399	1	0.00	0.01	0.07
1A	36	-3.496	-0.142	0.002	0.000	-0.000	-0.188	1	0.00	0.01	0.03
1B	36	-3.496	0.048	0.002	0.000	-0.000	-0.355	1	0.00	0.01	0.06
1C	36	-3.496	-0.142	0.000	0.000	-0.000	-0.188	1	0.00	0.01	0.03
1D	36	-3.496	0.048	0.000	0.000	-0.000	-0.355	1	0.00	0.01	0.06
1E	36	1.504	-0.142	0.002	0.000	-0.000	-0.188	1	0.00	0.01	0.03
1F	36	1.504	0.048	0.002	0.000	-0.000	-0.355	1	0.00	0.01	0.06
1G	36	1.504	-0.142	0.000	0.000	-0.000	-0.188	1	0.00	0.01	0.03
1H	36	1.504	0.048	0.000	0.000	-0.000	-0.355	1	0.00	0.01	0.06
1I	36	-3.756	-0.177	0.004	0.000	-0.000	-0.187	1	0.00	0.02	0.03
1J	36	-3.756	0.083	0.004	0.000	-0.000	-0.356	1	0.00	0.02	0.06
1K	36	-3.756	-0.177	-0.001	0.000	0.000	-0.187	1	0.00	0.02	0.03
1L	36	-3.756	0.083	-0.001	0.000	0.000	-0.356	1	0.00	0.02	0.06
1M	36	1.764	-0.177	0.004	0.000	-0.000	-0.187	1	0.00	0.01	0.03
1N	36	1.764	0.083	0.004	0.000	-0.000	-0.356	1	0.00	0.01	0.06
1O	36	1.764	-0.177	-0.001	0.000	0.000	-0.187	1	0.00	0.01	0.03
1P	36	1.764	0.083	-0.001	0.000	0.000	-0.356	1	0.00	0.01	0.06
2	36	-1.933	-0.063	0.002	0.000	-0.000	-0.510	1	0.00	0.01	0.08
7	36	1.750	-0.157	0.004	0.000	-0.001	-0.449	1	0.00	0.01	0.07
1A	72	-3.496	-0.170	0.002	0.000	-0.001	-0.217	1	0.00	0.01	0.04
1B	72	-3.496	0.021	0.002	0.000	-0.001	-0.370	1	0.00	0.01	0.06
1C	72	-3.496	-0.170	0.000	0.000	-0.000	-0.217	1	0.00	0.01	0.04
1D	72	-3.496	0.021	0.000	0.000	-0.000	-0.370	1	0.00	0.01	0.06
1E	72	1.504	-0.170	0.002	0.000	-0.001	-0.217	1	0.00	0.01	0.04
1F	72	1.504	0.021	0.002	0.000	-0.001	-0.370	1	0.00	0.01	0.06
1G	72	1.504	-0.170	0.000	0.000	-0.000	-0.217	1	0.00	0.01	0.04
1H	72	1.504	0.021	0.000	0.000	-0.000	-0.370	1	0.00	0.01	0.06
1I	72	-3.756	-0.205	0.004	0.000	-0.002	-0.221	1	0.00	0.02	0.04
1J	72	-3.756	0.055	0.004	0.000	-0.002	-0.366	1	0.00	0.02	0.06
1K	72	-3.756	-0.205	-0.001	0.000	0.001	-0.221	1	0.00	0.02	0.04
1L	72	-3.756	0.055	-0.001	0.000	0.001	-0.366	1	0.00	0.02	0.06
1M	72	1.764	-0.205	0.004	0.000	-0.002	-0.221	1	0.00	0.01	0.04
1N	72	1.764	0.055	0.004	0.000	-0.002	-0.366	1	0.00	0.01	0.06
1O	72	1.764	-0.205	-0.001	0.000	0.001	-0.221	1	0.00	0.01	0.04
1P	72	1.764	0.055	-0.001	0.000	0.001	-0.366	1	0.00	0.01	0.06
2	72	-1.933	-0.099	0.002	0.000	-0.001	-0.539	1	0.00	0.01	0.09
7	72	1.750	-0.193	0.004	0.000	-0.002	-0.512	1	0.00	0.01	0.08

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-3.496	-0.001	-0.217	1	0.1083	0.8861	0.9988	--	--	0.13	--	0.17	Snell. 'zx'= 250
1B	-3.496	-0.001	-0.370	1	0.1083	0.8861	0.9997	--	--	0.13	--	0.20	Snell. 'zx'= 250
1C	-3.496	-0.000	-0.217	1	0.1083	1.5000	0.9988	--	--	0.13	--	0.17	Snell. 'zx'= 250
1D	-3.496	-0.000	-0.370	1	0.1083	1.5000	0.9997	--	--	0.13	--	0.19	Snell. 'zx'= 250
1E	1.504	-0.001	-0.217	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1F	1.504	-0.001	-0.370	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1G	1.504	-0.000	-0.217	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1H	1.504	-0.000	-0.370	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1I	-3.756	-0.002	-0.221	1	0.1083	0.8776	0.9985	--	--	0.14	--	0.18	Snell. 'zx'= 250
1J	-3.756	-0.002	-0.366	1	0.1083	0.8776	0.9999	--	--	0.14	--	0.21	Snell. 'zx'= 250
1K	-3.756	0.001	-0.221	1	0.1083	0.8776	0.9985	--	--	0.14	--	0.18	Snell. 'zx'= 250
1L	-3.756	0.001	-0.366	1	0.1083	0.8776	0.9999	--	--	0.14	--	0.20	Snell. 'zx'= 250
1M	1.764	-0.002	-0.221	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1N	1.764	-0.002	-0.366	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1O	1.764	0.001	-0.221	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1P	1.764	0.001	-0.366	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
2	-1.933	-0.001	-0.539	1	0.1083	0.9370	0.9998	--	--	0.07	--	0.16	Snell. 'zx'= 250
7	1.750	-0.002	-0.512	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250

ASTA NUM. 85 NI 139 NF 130 Lungh. 72.0 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-1.798	-0.616	0.000	0.000	-0.000	0.254	1	0.00	0.01	0.04	
1B	0	-1.798	-0.401	0.000	0.000	-0.000	0.065	1	0.00	0.01	0.01	
1C	0	-1.798	-0.616	-0.004	0.000	-0.001	0.254	1	0.00	0.01	0.04	
1D	0	-1.798	-0.401	-0.004	0.000	-0.001	0.065	1	0.00	0.01	0.01	
1E	0	2.250	-0.616	0.000	0.000	-0.000	0.254	1	0.00	0.01	0.04	
1F	0	2.250	-0.401	0.000	0.000	-0.000	0.065	1	0.00	0.01	0.01	
1G	0	2.250	-0.616	-0.004	0.000	-0.001	0.254	1	0.00	0.01	0.04	
1H	0	2.250	-0.401	-0.004	0.000	-0.001	0.065	1	0.00	0.01	0.01	
1I	0	-2.762	-0.671	0.001	0.000	0.000	0.224	1	0.00	0.01	0.04	
1J	0	-2.762	-0.346	0.001	0.000	0.000	0.096	1	0.00	0.01	0.02	
1K	0	-2.762	-0.671	-0.005	0.000	-0.001	0.224	1	0.00	0.01	0.04	
1L	0	-2.762	-0.346	-0.005	0.000	-0.001	0.096	1	0.00	0.01	0.02	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1M	0	3.214	-0.671	0.001	0.000	0.000	0.224	1	0.00	0.01	0.04
1N	0	3.214	-0.346	0.001	0.000	0.000	0.096	1	0.00	0.01	0.02
1O	0	3.214	-0.671	-0.005	0.000	-0.001	0.224	1	0.00	0.01	0.04
1P	0	3.214	-0.346	-0.005	0.000	-0.001	0.096	1	0.00	0.01	0.02
2	0	0.317	-0.937	-0.003	0.000	-0.001	0.304	1	0.01	0.00	0.05
7	0	-0.956	-0.442	-0.005	0.000	-0.001	0.249	1	0.00	0.00	0.04
1A	36	-1.798	-0.644	0.000	0.000	-0.000	0.065	1	0.00	0.01	0.01
1B	36	-1.798	-0.428	0.000	0.000	-0.000	-0.122	1	0.00	0.01	0.02
1C	36	-1.798	-0.644	-0.004	0.000	0.001	0.065	1	0.00	0.01	0.01
1D	36	-1.798	-0.428	-0.004	0.000	0.001	-0.122	1	0.00	0.01	0.02
1E	36	2.250	-0.644	0.000	0.000	-0.000	0.065	1	0.00	0.01	0.01
1F	36	2.250	-0.428	0.000	0.000	-0.000	-0.122	1	0.00	0.01	0.02
1G	36	2.250	-0.644	-0.004	0.000	0.001	0.065	1	0.00	0.01	0.01
1H	36	2.250	-0.428	-0.004	0.000	0.001	-0.122	1	0.00	0.01	0.02
1I	36	-2.762	-0.698	0.001	0.000	-0.000	-0.054	1	0.00	0.01	0.01
1J	36	-2.762	-0.374	0.001	0.000	-0.000	-0.003	1	0.00	0.01	0.00
1K	36	-2.762	-0.698	-0.005	0.000	0.001	-0.054	1	0.00	0.01	0.01
1L	36	-2.762	-0.374	-0.005	0.000	0.001	-0.003	1	0.00	0.01	0.00
1M	36	3.214	-0.698	0.001	0.000	-0.000	-0.054	1	0.00	0.01	0.01
1N	36	3.214	-0.374	0.001	0.000	-0.000	-0.003	1	0.00	0.01	0.00
1O	36	3.214	-0.698	-0.005	0.000	0.001	-0.054	1	0.00	0.01	0.01
1P	36	3.214	-0.374	-0.005	0.000	0.001	-0.003	1	0.00	0.01	0.00
2	36	0.317	-0.973	-0.003	0.000	0.000	-0.040	1	0.01	0.00	0.01
7	36	-0.956	-0.478	-0.005	0.000	0.001	0.083	1	0.00	0.00	0.01
1A	72	-1.798	-0.671	0.000	0.000	-0.000	-0.134	1	0.00	0.01	0.02
1B	72	-1.798	-0.456	0.000	0.000	-0.000	-0.319	1	0.00	0.01	0.05
1C	72	-1.798	-0.671	-0.004	0.000	0.002	-0.134	1	0.00	0.01	0.02
1D	72	-1.798	-0.456	-0.004	0.000	0.002	-0.319	1	0.00	0.01	0.05
1E	72	2.250	-0.671	0.000	0.000	-0.000	-0.134	1	0.00	0.01	0.02
1F	72	2.250	-0.456	0.000	0.000	-0.000	-0.319	1	0.00	0.01	0.05
1G	72	2.250	-0.671	-0.004	0.000	0.002	-0.134	1	0.00	0.01	0.02
1H	72	2.250	-0.456	-0.004	0.000	0.002	-0.319	1	0.00	0.01	0.05
1I	72	-2.762	-0.726	0.001	0.000	-0.001	-0.341	1	0.01	0.01	0.06
1J	72	-2.762	-0.401	0.001	0.000	-0.001	-0.112	1	0.00	0.01	0.02
1K	72	-2.762	-0.726	-0.005	0.000	0.002	-0.341	1	0.01	0.01	0.06
1L	72	-2.762	-0.401	-0.005	0.000	0.002	-0.112	1	0.00	0.01	0.02
1M	72	3.214	-0.726	0.001	0.000	-0.001	-0.341	1	0.01	0.01	0.06
1N	72	3.214	-0.401	0.001	0.000	-0.001	-0.112	1	0.00	0.01	0.02
1O	72	3.214	-0.726	-0.005	0.000	0.002	-0.341	1	0.01	0.01	0.06
1P	72	3.214	-0.401	-0.005	0.000	0.002	-0.112	1	0.00	0.01	0.02
2	72	0.318	-1.009	-0.003	0.000	0.001	-0.397	1	0.01	0.00	0.07
7	72	-0.956	-0.515	-0.005	0.000	0.003	-0.096	1	0.00	0.00	0.02

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN		kN*m										
1A	-1.798	-0.000	0.254	1	0.1083	1.0847	0.9957	--	--	0.07	--	0.11	Snell. 'zx'= 250
1B	-1.798	-0.000	-0.319	1	0.1083	1.0847	0.9966	--	--	0.07	--	0.12	Snell. 'zx'= 250
1C	-1.798	0.002	0.254	1	0.1083	0.9414	0.9957	--	--	0.07	--	0.11	Snell. 'zx'= 250
1D	-1.798	0.002	-0.319	1	0.1083	0.9414	0.9966	--	--	0.07	--	0.12	Snell. 'zx'= 250
1E	2.250	-0.000	0.254	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1F	2.250	-0.000	-0.319	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1G	2.250	0.002	0.254	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1H	2.250	0.002	-0.319	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1I	-2.762	-0.001	-0.341	1	0.1083	1.0420	0.9928	--	--	0.11	--	0.16	Snell. 'zx'= 250
1J	-2.762	-0.001	-0.112	1	0.1083	1.0420	0.9921	--	--	0.11	--	0.12	Snell. 'zx'= 250
1K	-2.762	0.002	-0.341	1	0.1083	0.9130	0.9928	--	--	0.11	--	0.16	Snell. 'zx'= 250
1L	-2.762	0.002	-0.112	1	0.1083	0.9130	0.9921	--	--	0.11	--	0.13	Snell. 'zx'= 250
1M	3.214	-0.001	-0.341	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1N	3.214	-0.001	-0.112	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1O	3.214	0.002	-0.341	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1P	3.214	0.002	-0.112	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
2	0.318	0.001	-0.397	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
7	-0.956	0.003	0.249	1	0.1083	0.9771	0.9979	--	--	0.04	--	0.08	Snell. 'zx'= 250

**ASTA NUM. 86** NI 139 NF 151 Lungh. 72.0 cm SEZ. 5 Rp B= 0.010 H= 0.100 m

categoria: p.p. y qy tot.  
qy medio: 0.08 0.08 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-1.752	-0.038	0.007	0.000	0.002	-0.216	1	0.00	0.01	0.04	
1B	0	-1.752	0.109	0.007	0.000	0.002	-0.414	1	0.00	0.01	0.07	
1C	0	-1.752	-0.038	-0.001	0.000	-0.000	-0.216	1	0.00	0.01	0.04	
1D	0	-1.752	0.109	-0.001	0.000	-0.000	-0.414	1	0.00	0.01	0.07	
1E	0	2.058	-0.038	0.007	0.000	0.002	-0.216	1	0.00	0.01	0.04	
1F	0	2.058	0.109	0.007	0.000	0.002	-0.414	1	0.00	0.01	0.07	
1G	0	2.058	-0.038	-0.001	0.000	-0.000	-0.216	1	0.00	0.01	0.04	
1H	0	2.058	0.109	-0.001	0.000	-0.000	-0.414	1	0.00	0.01	0.07	
1I	0	-2.390	-0.079	0.008	0.000	0.002	-0.240	1	0.00	0.01	0.04	
1J	0	-2.390	0.149	0.008	0.000	0.002	-0.390	1	0.00	0.01	0.06	
1K	0	-2.390	-0.079	-0.002	0.000	-0.000	-0.240	1	0.00	0.01	0.04	
1L	0	-2.390	0.149	-0.002	0.000	-0.000	-0.390	1	0.00	0.01	0.06	
1M	0	2.697	-0.079	0.008	0.000	0.002	-0.240	1	0.00	0.01	0.04	
1N	0	2.697	0.149	0.008	0.000	0.002	-0.390	1	0.00	0.01	0.06	
1O	0	2.697	-0.079	-0.002	0.000	-0.000	-0.240	1	0.00	0.01	0.04	
1P	0	2.697	0.149	-0.002	0.000	-0.000	-0.390	1	0.00	0.01	0.06	
2	0	0.268	0.056	0.006	0.000	0.001	-0.594	1	0.00	0.00	0.10	
7	0	1.904	-0.136	-0.004	0.000	-0.001	-0.412	1	0.00	0.01	0.07	
1A	36	-1.752	-0.066	0.007	0.000	-0.001	-0.218	1	0.00	0.01	0.04	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1B	36	-1.752	0.081	0.007	0.000	-0.001	-0.397	1	0.00	0.01	0.07	
1C	36	-1.752	-0.066	-0.001	0.000	0.000	-0.218	1	0.00	0.01	0.04	
1D	36	-1.752	0.081	-0.001	0.000	0.000	-0.397	1	0.00	0.01	0.07	
1E	36	2.058	-0.066	0.007	0.000	-0.001	-0.218	1	0.00	0.01	0.04	
1F	36	2.058	0.081	0.007	0.000	-0.001	-0.397	1	0.00	0.01	0.07	
1G	36	2.058	-0.066	-0.001	0.000	0.000	-0.218	1	0.00	0.01	0.04	
1H	36	2.058	0.081	-0.001	0.000	0.000	-0.397	1	0.00	0.01	0.07	
1I	36	-2.390	-0.107	0.008	0.000	-0.001	-0.304	1	0.00	0.01	0.05	
1J	36	-2.390	0.122	0.008	0.000	-0.001	-0.311	1	0.00	0.01	0.05	
1K	36	-2.390	-0.107	-0.002	0.000	0.000	-0.304	1	0.00	0.01	0.05	
1L	36	-2.390	0.122	-0.002	0.000	0.000	-0.311	1	0.00	0.01	0.05	
1M	36	2.697	-0.107	0.008	0.000	-0.001	-0.304	1	0.00	0.01	0.05	
1N	36	2.697	0.122	0.008	0.000	-0.001	-0.311	1	0.00	0.01	0.05	
1O	36	2.697	-0.107	-0.002	0.000	0.000	-0.304	1	0.00	0.01	0.05	
1P	36	2.697	0.122	-0.002	0.000	0.000	-0.311	1	0.00	0.01	0.05	
2	36	0.268	0.020	0.006	0.000	-0.001	-0.580	1	0.00	0.00	0.10	
7	36	1.904	-0.172	-0.004	0.000	0.001	-0.468	1	0.00	0.01	0.08	
1A	72	-1.752	-0.094	0.007	0.000	-0.003	-0.229	1	0.00	0.01	0.04	
1B	72	-1.752	0.053	0.007	0.000	-0.003	-0.390	1	0.00	0.01	0.06	
1C	72	-1.752	-0.094	-0.001	0.000	0.000	-0.229	1	0.00	0.01	0.04	
1D	72	-1.752	0.053	-0.001	0.000	0.000	-0.390	1	0.00	0.01	0.06	
1E	72	2.059	-0.094	0.007	0.000	-0.003	-0.229	1	0.00	0.01	0.04	
1F	72	2.059	0.053	0.007	0.000	-0.003	-0.390	1	0.00	0.01	0.06	
1G	72	2.059	-0.094	-0.001	0.000	0.000	-0.229	1	0.00	0.01	0.04	
1H	72	2.059	0.053	-0.001	0.000	0.000	-0.390	1	0.00	0.01	0.06	
1I	72	-2.390	-0.134	0.008	0.000	-0.004	-0.379	1	0.00	0.01	0.06	
1J	72	-2.390	0.094	0.008	0.000	-0.004	-0.241	1	0.00	0.01	0.04	
1K	72	-2.390	-0.134	-0.002	0.000	0.001	-0.379	1	0.00	0.01	0.06	
1L	72	-2.390	0.094	-0.002	0.000	0.001	-0.241	1	0.00	0.01	0.04	
1M	72	2.697	-0.134	0.008	0.000	-0.004	-0.379	1	0.00	0.01	0.06	
1N	72	2.697	0.094	0.008	0.000	-0.004	-0.241	1	0.00	0.01	0.04	
1O	72	2.697	-0.134	-0.002	0.000	0.001	-0.379	1	0.00	0.01	0.06	
1P	72	2.697	0.094	-0.002	0.000	0.001	-0.241	1	0.00	0.01	0.04	
2	72	0.269	-0.016	0.006	0.000	-0.003	-0.579	1	0.00	0.00	0.10	
7	72	1.904	-0.208	-0.004	0.000	0.002	-0.536	1	0.00	0.01	0.09	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	kn	kn*m											
1A	-1.752	-0.003	-0.229	1	0.1083	0.9429	0.9998	--	--	0.07	--	0.11	Snell. 'zx'= 250
1B	-1.752	-0.003	-0.414	1	0.1083	0.9429	0.9999	--	--	0.07	--	0.14	Snell. 'zx'= 250
1C	-1.752	0.000	-0.229	1	0.1083	1.0278	0.9998	--	--	0.07	--	0.11	Snell. 'zx'= 250
1D	-1.752	0.000	-0.414	1	0.1083	1.0278	0.9999	--	--	0.07	--	0.14	Snell. 'zx'= 250
1E	2.059	-0.003	-0.229	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1F	2.059	-0.003	-0.414	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1G	2.059	0.000	-0.229	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1H	2.059	0.000	-0.414	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1I	-2.390	-0.004	-0.379	1	0.1083	0.9221	0.9986	--	--	0.09	--	0.16	Snell. 'zx'= 250
1J	-2.390	-0.004	-0.390	1	0.1083	0.9221	0.9986	--	--	0.09	--	0.16	Snell. 'zx'= 250
1K	-2.390	0.001	-0.379	1	0.1083	0.9713	0.9986	--	--	0.09	--	0.16	Snell. 'zx'= 250
1L	-2.390	0.001	-0.390	1	0.1083	0.9713	0.9986	--	--	0.09	--	0.16	Snell. 'zx'= 250
1M	2.697	-0.004	-0.379	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1N	2.697	-0.004	-0.390	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1O	2.697	0.001	-0.379	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
1P	2.697	0.001	-0.390	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
2	0.269	-0.003	-0.594	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250
7	1.904	0.002	-0.536	1	0.1083	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 250

ASTA NUM. 87 NI 24 NF 140 Lungh. 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.

qy medio: 0.22 1.00 1.22 kn/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kn			kn*m							
1A	0	-5.241	-0.602	0.407	0.000	-0.008	-0.569	4	0.00	0.01	0.04	
1B	0	-5.241	1.260	0.407	0.000	-0.008	-1.167	4	0.00	0.01	0.07	
1C	0	-5.241	-0.602	-3.563	0.000	-0.203	-0.569	4	0.03	0.01	0.08	
1D	0	-5.241	1.260	-3.563	0.000	-0.203	-1.167	4	0.03	0.01	0.10	
1E	0	1.537	-0.602	0.407	0.000	-0.008	-0.569	1	0.00	0.00	0.02	
1F	0	1.537	1.260	0.407	0.000	-0.008	-1.167	1	0.00	0.00	0.03	
1G	0	1.537	-0.602	-3.563	0.000	-0.203	-0.569	4	0.03	0.00	0.06	
1H	0	1.537	1.260	-3.563	0.000	-0.203	-1.167	4	0.03	0.00	0.09	
1I	0	-5.397	-0.192	0.211	0.000	0.002	-0.568	4	0.00	0.01	0.04	
1J	0	-5.397	0.850	0.211	0.000	0.002	-1.168	4	0.00	0.01	0.06	
1K	0	-5.397	-0.192	-3.367	0.000	-0.212	-0.568	4	0.02	0.01	0.08	
1L	0	-5.397	0.850	-3.367	0.000	-0.212	-1.168	4	0.02	0.01	0.10	
1M	0	1.693	-0.192	0.211	0.000	0.002	-0.568	3	0.00	0.00	0.03	
1N	0	1.693	0.850	0.211	0.000	0.002	-1.168	1	0.00	0.00	0.03	
1O	0	1.693	-0.192	-3.367	0.000	-0.212	-0.568	4	0.02	0.00	0.06	
1P	0	1.693	0.850	-3.367	0.000	-0.212	-1.168	4	0.02	0.00	0.09	
2	0	-3.349	1.250	-2.975	0.000	-0.198	-1.115	4	0.02	0.01	0.09	
7	0	-10.740	0.963	-0.945	0.000	-0.067	-1.448	4	0.01	0.02	0.11	
1A	5	-5.241	-0.663	0.407	0.000	-0.034	-0.555	4	0.00	0.01	0.05	
1B	5	-5.241	1.199	0.407	0.000	-0.034	-1.152	4	0.00	0.01	0.07	
1C	5	-5.241	-0.663	-3.563	0.000	-0.018	-0.555	4	0.03	0.01	0.04	
1D	5	-5.241	1.199	-3.563	0.000	-0.018	-1.152	4	0.03	0.01	0.07	
1E	5	1.537	-0.663	0.407	0.000	-0.034	-0.555	4	0.00	0.00	0.03	
1F	5	1.537	1.199	0.407	0.000	-0.034	-1.152	4	0.00	0.00	0.06	
1G	5	1.537	-0.663	-3.563	0.000	-0.018	-0.555	4	0.03	0.00	0.03	
1H	5	1.537	1.199	-3.563	0.000	-0.018	-1.152	4	0.03	0.00	0.05	
1I	5	-5.397	-0.253	0.211	0.000	-0.018	-0.551	4	0.00	0.01	0.04	



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1J	5	-5.397	0.789	0.211	0.000	-0.018	-1.155	4	0.00	0.01	0.07
1K	5	-5.397	-0.253	-3.367	0.000	-0.034	-0.551	4	0.02	0.01	0.05
1L	5	-5.397	0.789	-3.367	0.000	-0.034	-1.155	4	0.02	0.01	0.07
1M	5	1.693	-0.253	0.211	0.000	-0.018	-0.551	4	0.00	0.00	0.03
1N	5	1.693	0.789	0.211	0.000	-0.018	-1.155	4	0.00	0.00	0.05
1O	5	1.693	-0.253	-3.367	0.000	-0.034	-0.551	4	0.02	0.00	0.03
1P	5	1.693	0.789	-3.367	0.000	-0.034	-1.155	4	0.02	0.00	0.06
2	5	-3.349	1.171	-2.975	0.000	-0.049	-1.054	4	0.02	0.01	0.06
7	5	-10.740	0.883	-0.945	0.000	-0.020	-1.402	4	0.01	0.02	0.10
1A	10	-5.241	-0.724	0.407	0.000	-0.061	-0.543	4	0.00	0.01	0.05
1B	10	-5.241	1.138	0.407	0.000	-0.061	-1.139	4	0.00	0.01	0.08
1C	10	-5.241	-0.724	-3.563	0.000	0.167	-0.543	3	0.03	0.01	0.06
1D	10	-5.241	1.138	-3.563	0.000	0.167	-1.139	3	0.03	0.01	0.08
1E	10	1.537	-0.724	0.407	0.000	-0.061	-0.543	4	0.00	0.00	0.04
1F	10	1.537	1.138	0.407	0.000	-0.061	-1.139	4	0.00	0.00	0.06
1G	10	1.537	-0.724	-3.563	0.000	0.167	-0.543	3	0.03	0.00	0.05
1H	10	1.537	1.138	-3.563	0.000	0.167	-1.139	1	0.03	0.00	0.04
1I	10	-5.397	-0.313	0.211	0.000	-0.038	-0.537	4	0.00	0.01	0.05
1J	10	-5.397	0.728	0.211	0.000	-0.038	-1.145	4	0.00	0.01	0.07
1K	10	-5.397	-0.313	-3.367	0.000	0.144	-0.537	3	0.02	0.01	0.05
1L	10	-5.397	0.728	-3.367	0.000	0.144	-1.145	3	0.02	0.01	0.08
1M	10	1.693	-0.313	0.211	0.000	-0.038	-0.537	4	0.00	0.00	0.03
1N	10	1.693	0.728	0.211	0.000	-0.038	-1.145	4	0.00	0.00	0.06
1O	10	1.693	-0.313	-3.367	0.000	0.144	-0.537	3	0.02	0.00	0.05
1P	10	1.693	0.728	-3.367	0.000	0.144	-1.145	1	0.02	0.00	0.04
2	10	-3.349	1.092	-2.975	0.000	0.099	-0.998	3	0.02	0.00	0.06
7	10	-10.740	0.804	-0.945	0.000	0.028	-1.360	4	0.01	0.02	0.09

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-5.241	-0.061	-0.569	4	0.8247	1.0032	1.0091	--	--	0.01	--	0.04	Snell.imin= 5
1B	-5.241	-0.061	-1.167	4	0.8247	1.0032	1.0092	--	--	0.01	--	0.07	Snell.imin= 5
1C	-5.241	-0.203	-0.569	4	0.8247	0.9959	1.0091	--	--	0.01	--	0.05	Snell.imin= 5
1D	-5.241	-0.203	-1.167	4	0.8247	0.9959	1.0092	--	--	0.01	--	0.08	Snell.imin= 5
1E	1.537	-0.061	-0.569	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1F	1.537	-0.061	-1.167	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1G	1.537	-0.203	-0.569	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1H	1.537	-0.203	-1.167	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1I	-5.397	-0.038	-0.568	4	0.8247	1.0019	1.0093	--	--	0.01	--	0.04	Snell.imin= 5
1J	-5.397	-0.038	-1.168	4	0.8247	1.0019	1.0095	--	--	0.01	--	0.07	Snell.imin= 5
1K	-5.397	-0.212	-0.568	4	0.8247	0.9969	1.0093	--	--	0.01	--	0.05	Snell.imin= 5
1L	-5.397	-0.212	-1.168	4	0.8247	0.9969	1.0095	--	--	0.01	--	0.08	Snell.imin= 5
1M	1.693	-0.038	-0.568	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1N	1.693	-0.038	-1.168	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1O	1.693	-0.212	-0.568	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1P	1.693	-0.212	-1.168	4	0.8247	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
2	-3.349	-0.198	-1.115	4	0.8247	0.9989	1.0055	--	--	0.01	--	0.07	Snell.imin= 5
7	-10.740	-0.067	-1.448	4	0.8247	0.9979	1.0184	--	--	0.02	--	0.10	Snell.imin= 5

**ASTA NUM. 88** NI 127 NF 171 Lungh. 109.0 cm SEZ. 12 Rf B= 0.100 H= 0.150 s= 0.005 r est.= 0.007 r int.= 0.005 m

categoria: p.p. y qy tot.  
qy medio: 0.18 0.18 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-2.940	1.801	1.339	1.585	0.928	-1.837	1	0.08	0.00	0.06	
1B	0	-2.940	3.491	1.339	1.585	0.928	-3.657	1	0.08	0.00	0.12	
1C	0	-2.940	1.801	-0.016	1.585	-0.000	-1.837	1	0.08	0.00	0.06	
1D	0	-2.940	3.491	-0.016	1.585	-0.000	-3.657	1	0.08	0.00	0.12	
1E	0	0.276	1.801	1.339	1.585	0.928	-1.837	1	0.08	0.00	0.06	
1F	0	0.276	3.491	1.339	1.585	0.928	-3.657	1	0.08	0.00	0.12	
1G	0	0.276	1.801	-0.016	1.585	-0.000	-1.837	1	0.08	0.00	0.06	
1H	0	0.276	3.491	-0.016	1.585	-0.000	-3.657	1	0.08	0.00	0.12	
1I	0	-2.522	1.966	1.950	1.615	1.401	-2.015	1	0.08	0.00	0.06	
1J	0	-2.522	3.326	1.950	1.615	1.401	-3.479	1	0.08	0.00	0.11	
1K	0	-2.522	1.966	-0.627	1.615	-0.473	-2.015	1	0.08	0.00	0.06	
1L	0	-2.522	3.326	-0.627	1.615	-0.473	-3.479	1	0.08	0.00	0.11	
1M	0	-0.142	1.966	1.950	1.615	1.401	-2.015	1	0.08	0.00	0.06	
1N	0	-0.142	3.326	1.950	1.615	1.401	-3.479	1	0.08	0.00	0.11	
1O	0	-0.142	1.966	-0.627	1.615	-0.473	-2.015	1	0.08	0.00	0.06	
1P	0	-0.142	3.326	-0.627	1.615	-0.473	-3.479	1	0.08	0.00	0.11	
2	0	-2.800	3.725	1.005	2.238	0.729	-3.885	1	0.11	0.00	0.12	
7	0	-1.190	2.512	2.223	1.200	1.625	-2.580	1	0.06	0.00	0.08	
1A	55	-2.940	1.701	1.339	1.585	0.197	-0.883	1	0.08	0.00	0.03	
1B	55	-2.940	3.392	1.339	1.585	0.197	-1.781	1	0.08	0.00	0.06	
1C	55	-2.940	1.701	-0.016	1.585	0.010	-0.883	1	0.08	0.00	0.03	
1D	55	-2.940	3.392	-0.016	1.585	0.010	-1.781	1	0.08	0.00	0.06	
1E	55	0.276	1.701	1.339	1.585	0.197	-0.883	1	0.08	0.00	0.03	
1F	55	0.276	3.392	1.339	1.585	0.197	-1.781	1	0.08	0.00	0.06	
1G	55	0.276	1.701	-0.016	1.585	0.010	-0.883	1	0.08	0.00	0.03	
1H	55	0.276	3.392	-0.016	1.585	0.010	-1.781	1	0.08	0.00	0.06	
1I	55	-2.522	1.866	1.950	1.615	0.338	-0.971	1	0.08	0.00	0.03	
1J	55	-2.522	3.227	1.950	1.615	0.338	-1.694	1	0.08	0.00	0.05	
1K	55	-2.522	1.866	-0.627	1.615	-0.131	-0.971	1	0.08	0.00	0.03	
1L	55	-2.522	3.227	-0.627	1.615	-0.131	-1.694	1	0.08	0.00	0.05	
1M	55	-0.142	1.866	1.950	1.615	0.338	-0.971	1	0.08	0.00	0.03	
1N	55	-0.142	3.227	1.950	1.615	0.338	-1.694	1	0.08	0.00	0.05	
1O	55	-0.142	1.866	-0.627	1.615	-0.131	-0.971	1	0.08	0.00	0.03	
1P	55	-0.142	3.227	-0.627	1.615	-0.131	-1.694	1	0.08	0.00	0.05	
2	55	-2.800	3.596	1.005	2.238	0.181	-1.890	1	0.11	0.00	0.06	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

7	55	-1.190	2.383	2.223	1.200	0.413	-1.246	1	0.06	0.00	0.04
1A	109	-2.940	1.602	1.339	1.585	-0.533	0.016	1	0.08	0.00	0.02
1B	109	-2.940	3.292	1.339	1.585	-0.533	0.040	1	0.08	0.00	0.02
1C	109	-2.940	1.602	-0.016	1.585	0.019	0.016	1	0.08	0.00	0.00
1D	109	-2.940	3.292	-0.016	1.585	0.019	0.040	1	0.08	0.00	0.00
1E	109	0.276	1.602	1.339	1.585	-0.533	0.016	1	0.08	0.00	0.02
1F	109	0.276	3.292	1.339	1.585	-0.533	0.040	1	0.08	0.00	0.02
1G	109	0.276	1.602	-0.016	1.585	0.019	0.016	1	0.08	0.00	0.00
1H	109	0.276	3.292	-0.016	1.585	0.019	0.040	1	0.08	0.00	0.00
1I	109	-2.522	1.767	1.950	1.615	-0.726	0.019	1	0.08	0.00	0.03
1J	109	-2.522	3.127	1.950	1.615	-0.726	0.038	1	0.08	0.00	0.03
1K	109	-2.522	1.767	-0.627	1.615	0.212	0.019	1	0.08	0.00	0.01
1L	109	-2.522	3.127	-0.627	1.615	0.212	0.038	1	0.08	0.00	0.01
1M	109	-0.142	1.767	1.950	1.615	-0.726	0.019	1	0.08	0.00	0.03
1N	109	-0.142	3.127	1.950	1.615	-0.726	0.038	1	0.08	0.00	0.03
1O	109	-0.142	1.767	-0.627	1.615	0.212	0.019	1	0.08	0.00	0.01
1P	109	-0.142	3.127	-0.627	1.615	0.212	0.038	1	0.08	0.00	0.01
2	109	-2.800	3.466	1.005	2.238	-0.367	0.034	1	0.11	0.00	0.02
7	109	-1.190	2.253	2.223	1.200	-0.798	0.017	1	0.06	0.00	0.03

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-2.940	0.928	-1.837	1	0.9747	0.9987	0.9995	--	--	0.00	--	0.10	Snell. 'zx'= 27
1B	-2.940	0.928	-3.657	1	0.9747	0.9987	0.9994	--	--	0.00	--	0.16	Snell. 'zx'= 27
1C	-2.940	0.019	-1.837	1	0.9747	0.9999	0.9995	--	--	0.00	--	0.06	Snell. 'zx'= 27
1D	-2.940	0.019	-3.657	1	0.9747	0.9999	0.9994	--	--	0.00	--	0.12	Snell. 'zx'= 27
1E	0.276	0.928	-1.837	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1F	0.276	0.928	-3.657	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1G	0.276	0.019	-1.837	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1H	0.276	0.019	-3.657	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1I	-2.522	1.401	-2.015	1	0.9747	0.9990	0.9995	--	--	0.00	--	0.13	Snell. 'zx'= 27
1J	-2.522	1.401	-3.479	1	0.9747	0.9990	0.9995	--	--	0.00	--	0.17	Snell. 'zx'= 27
1K	-2.522	-0.473	-2.015	1	0.9747	0.9991	0.9995	--	--	0.00	--	0.09	Snell. 'zx'= 27
1L	-2.522	-0.473	-3.479	1	0.9747	0.9991	0.9995	--	--	0.00	--	0.14	Snell. 'zx'= 27
1M	-0.142	1.401	-2.015	1	0.9747	0.9999	1.0000	--	--	0.00	--	0.12	Snell. 'zx'= 27
1N	-0.142	1.401	-3.479	1	0.9747	0.9999	1.0000	--	--	0.00	--	0.17	Snell. 'zx'= 27
1O	-0.142	-0.473	-2.015	1	0.9747	1.0000	1.0000	--	--	0.00	--	0.08	Snell. 'zx'= 27
1P	-0.142	-0.473	-3.479	1	0.9747	1.0000	1.0000	--	--	0.00	--	0.13	Snell. 'zx'= 27
2	-2.800	0.729	-3.885	1	0.9747	0.9989	0.9995	--	--	0.00	--	0.16	Snell. 'zx'= 27
7	-1.190	1.625	-2.580	1	0.9747	0.9996	0.9998	--	--	0.00	--	0.15	Snell. 'zx'= 27

**ASTA NUM. 89** NI 183 NF 127 Lungh. 147.7 cm SEZ. 12 Rf B= 0.100 H= 0.150 s= 0.005 r est.= 0.007 r int.= 0.005 m

categoria: p.p. y qy tot.  
qy medio: 0.16 0.16 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-7.827	-1.969	0.149	-1.257	0.942	-0.515	1	0.06	0.01	0.04	
1B	0	-7.827	-0.089	0.149	-1.257	0.942	-1.689	1	0.06	0.01	0.05	
1C	0	-7.827	-1.969	-2.391	-1.257	-0.993	-0.515	1	0.06	0.01	0.04	
1D	0	-7.827	-0.089	-2.391	-1.257	-0.993	-1.689	1	0.06	0.01	0.05	
1E	0	-0.106	-1.969	0.149	-1.257	0.942	-0.515	1	0.06	0.00	0.04	
1F	0	-0.106	-0.089	0.149	-1.257	0.942	-1.689	1	0.06	0.00	0.05	
1G	0	-0.106	-1.969	-2.391	-1.257	-0.993	-0.515	1	0.06	0.00	0.04	
1H	0	-0.106	-0.089	-2.391	-1.257	-0.993	-1.689	1	0.06	0.00	0.05	
1I	0	-7.395	-1.626	2.055	-1.787	2.558	-0.726	1	0.09	0.01	0.11	
1J	0	-7.395	-0.432	2.055	-1.787	2.558	-1.478	1	0.09	0.01	0.11	
1K	0	-7.395	-1.626	-4.297	-1.787	-2.609	-0.726	1	0.09	0.01	0.11	
1L	0	-7.395	-0.432	-4.297	-1.787	-2.609	-1.478	1	0.09	0.01	0.11	
1M	0	-0.537	-1.626	2.055	-1.787	2.558	-0.726	1	0.09	0.00	0.11	
1N	0	-0.537	-0.432	2.055	-1.787	2.558	-1.478	1	0.09	0.00	0.11	
1O	0	-0.537	-1.626	-4.297	-1.787	-2.609	-0.726	1	0.09	0.00	0.11	
1P	0	-0.537	-0.432	-4.297	-1.787	-2.609	-1.478	1	0.09	0.00	0.11	
2	0	-12.270	0.281	-2.089	-1.660	-0.020	-4.117	1	0.08	0.02	0.13	
7	0	-7.979	0.485	-4.537	-4.746	0.590	-3.081	1	0.23	0.01	0.10	
1A	74	-7.760	-2.086	0.149	-1.257	0.746	-2.080	1	0.06	0.01	0.07	
1B	74	-7.760	-0.206	0.149	-1.257	0.746	-1.731	1	0.06	0.01	0.06	
1C	74	-7.760	-2.086	-2.391	-1.257	0.859	-2.080	1	0.06	0.01	0.07	
1D	74	-7.760	-0.206	-2.391	-1.257	0.859	-1.731	1	0.06	0.01	0.06	
1E	74	-0.039	-2.086	0.149	-1.257	0.746	-2.080	1	0.06	0.00	0.07	
1F	74	-0.039	-0.206	0.149	-1.257	0.746	-1.731	1	0.06	0.00	0.06	
1G	74	-0.039	-2.086	-2.391	-1.257	0.859	-2.080	1	0.06	0.00	0.07	
1H	74	-0.039	-0.206	-2.391	-1.257	0.859	-1.731	1	0.06	0.00	0.06	
1I	74	-7.328	-1.743	2.055	-1.787	0.903	-2.093	1	0.09	0.01	0.07	
1J	74	-7.328	-0.549	2.055	-1.787	0.903	-1.717	1	0.09	0.01	0.05	
1K	74	-7.328	-1.743	-4.297	-1.787	0.701	-2.093	1	0.09	0.01	0.07	
1L	74	-7.328	-0.549	-4.297	-1.787	0.701	-1.717	1	0.09	0.01	0.05	
1M	74	-0.471	-1.743	2.055	-1.787	0.903	-2.093	1	0.09	0.00	0.07	
1N	74	-0.471	-0.549	2.055	-1.787	0.903	-1.717	1	0.09	0.00	0.05	
1O	74	-0.471	-1.743	-4.297	-1.787	0.701	-2.093	1	0.09	0.00	0.07	
1P	74	-0.471	-0.549	-4.297	-1.787	0.701	-1.717	1	0.09	0.00	0.05	
2	74	-12.185	0.129	-2.089	-1.660	1.524	-3.966	1	0.08	0.02	0.13	
7	74	-7.893	0.332	-4.537	-4.746	3.941	-2.780	1	0.23	0.01	0.17	
1A	148	-7.694	-2.203	0.149	-1.257	0.550	-3.731	1	0.06	0.01	0.12	
1B	148	-7.694	-0.323	0.149	-1.257	0.550	-1.859	1	0.06	0.01	0.06	
1C	148	-7.694	-2.203	-2.391	-1.257	2.710	-3.731	1	0.06	0.01	0.12	
1D	148	-7.694	-0.323	-2.391	-1.257	2.710	-1.859	1	0.06	0.01	0.11	
1E	148	0.027	-2.203	0.149	-1.257	0.550	-3.731	1	0.06	0.00	0.12	
1F	148	0.027	-0.323	0.149	-1.257	0.550	-1.859	1	0.06	0.00	0.06	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1G	148	0.027	-2.203	-2.391	-1.257	2.710	-3.731	1	0.06	0.00	0.12	
1H	148	0.027	-0.323	-2.391	-1.257	2.710	-1.859	1	0.06	0.00	0.11	
1I	148	-7.262	-1.860	2.055	-1.787	-0.752	-3.548	1	0.09	0.01	0.11	
1J	148	-7.262	-0.666	2.055	-1.787	-0.752	-2.042	1	0.09	0.01	0.07	
1K	148	-7.262	-1.860	-4.297	-1.787	4.012	-3.548	1	0.09	0.01	0.17	
1L	148	-7.262	-0.666	-4.297	-1.787	4.012	-2.042	1	0.09	0.01	0.17	
1M	148	-0.404	-1.860	2.055	-1.787	-0.752	-3.548	1	0.09	0.00	0.11	
1N	148	-0.404	-0.666	2.055	-1.787	-0.752	-2.042	1	0.09	0.00	0.07	
1O	148	-0.404	-1.860	-4.297	-1.787	4.012	-3.548	1	0.09	0.00	0.17	
1P	148	-0.404	-0.666	-4.297	-1.787	4.012	-2.042	1	0.09	0.00	0.17	
2	148	-12.100	-0.024	-2.089	-1.660	3.067	-3.927	1	0.08	0.02	0.13	
7	148	-7.806	0.179	-4.537	-4.746	7.292	-2.591	1	0.23	0.01	0.31	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\gamma_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-7.827	0.942	-3.731	1	0.9467	1.0046	0.9997	--	--	0.01	--	0.17	Snell. 'zx'= 36
1B	-7.827	0.942	-1.859	1	0.9467	1.0046	1.0037	--	--	0.01	--	0.11	Snell. 'zx'= 36
1C	-7.827	2.710	-3.731	1	0.9467	0.9975	0.9997	--	--	0.01	--	0.25	Snell. 'zx'= 36
1D	-7.827	2.710	-1.859	1	0.9467	0.9975	1.0037	--	--	0.01	--	0.19	Snell. 'zx'= 36
1E	-0.106	0.942	-3.731	1	0.9467	1.0001	1.0000	--	--	0.00	--	0.16	Snell. 'zx'= 36
1F	-0.106	0.942	-1.859	1	0.9467	1.0001	1.0000	--	--	0.00	--	0.10	Snell. 'zx'= 36
1G	-0.106	2.710	-3.731	1	0.9467	1.0000	1.0000	--	--	0.00	--	0.23	Snell. 'zx'= 36
1H	-0.106	2.710	-1.859	1	0.9467	1.0000	1.0000	--	--	0.00	--	0.17	Snell. 'zx'= 36
1I	-7.395	2.558	-3.548	1	0.9467	0.9982	1.0000	--	--	0.01	--	0.23	Snell. 'zx'= 36
1J	-7.395	2.558	-2.042	1	0.9467	0.9982	1.0026	--	--	0.01	--	0.19	Snell. 'zx'= 36
1K	-7.395	4.012	-3.548	1	0.9467	0.9956	1.0000	--	--	0.01	--	0.30	Snell. 'zx'= 36
1L	-7.395	4.012	-2.042	1	0.9467	0.9956	1.0026	--	--	0.01	--	0.25	Snell. 'zx'= 36
1M	-0.537	2.558	-3.548	1	0.9467	0.9999	1.0000	--	--	0.00	--	0.22	Snell. 'zx'= 36
1N	-0.537	2.558	-2.042	1	0.9467	0.9999	1.0002	--	--	0.00	--	0.17	Snell. 'zx'= 36
1O	-0.537	4.012	-3.548	1	0.9467	0.9997	1.0000	--	--	0.00	--	0.28	Snell. 'zx'= 36
1P	-0.537	4.012	-2.042	1	0.9467	0.9997	1.0002	--	--	0.00	--	0.24	Snell. 'zx'= 36
2	-12.270	3.067	-4.117	1	0.9467	1.0003	1.0062	--	--	0.02	--	0.28	Snell. 'zx'= 36
7	-7.979	7.292	-3.081	1	0.9467	1.0009	1.0034	--	--	0.01	--	0.42	Snell. 'zx'= 36

**ASTA NUM. 90** NI 121 NF 140 Lungh. 109.0 cm SEZ. 12 Rf B= 0.100 H= 0.150 s= 0.005 r est.= 0.007 r int.= 0.005 m

categoria: p.p. y qy tot.

qy medio: 0.18 0.18 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-1.296	-1.151	0.501	0.423	0.252	1.322	1	0.02	0.00	0.04	
1B	0	-1.296	-0.017	0.501	0.423	0.252	0.110	1	0.02	0.00	0.01	
1C	0	-1.296	-1.151	-0.510	0.423	-0.462	1.322	1	0.02	0.00	0.04	
1D	0	-1.296	-0.017	-0.510	0.423	-0.462	0.110	1	0.02	0.00	0.02	
1E	0	1.127	-1.151	0.501	0.423	0.252	1.322	1	0.02	0.00	0.04	
1F	0	1.127	-0.017	0.501	0.423	0.252	0.110	1	0.02	0.00	0.01	
1G	0	1.127	-1.151	-0.510	0.423	-0.462	1.322	1	0.02	0.00	0.04	
1H	0	1.127	-0.017	-0.510	0.423	-0.462	0.110	1	0.02	0.00	0.02	
1I	0	-1.327	-0.975	0.593	0.426	0.332	1.136	1	0.02	0.00	0.04	
1J	0	-1.327	-0.193	0.593	0.426	0.332	0.297	1	0.02	0.00	0.01	
1K	0	-1.327	-0.975	-0.602	0.426	-0.541	1.136	1	0.02	0.00	0.04	
1L	0	-1.327	-0.193	-0.602	0.426	-0.541	0.297	1	0.02	0.00	0.02	
1M	0	1.158	-0.975	0.593	0.426	0.332	1.136	1	0.02	0.00	0.04	
1N	0	1.158	-0.193	0.593	0.426	0.332	0.297	1	0.02	0.00	0.01	
1O	0	1.158	-0.975	-0.602	0.426	-0.541	1.136	1	0.02	0.00	0.04	
1P	0	1.158	-0.193	-0.602	0.426	-0.541	0.297	1	0.02	0.00	0.02	
2	0	-0.101	-3.388	-0.012	-0.064	-0.199	3.741	1	0.02	0.00	0.12	
7	0	2.370	-1.578	-1.007	0.004	-0.913	1.798	1	0.01	0.00	0.06	
1A	55	-1.296	-1.251	0.501	0.423	-0.024	0.668	1	0.02	0.00	0.02	
1B	55	-1.296	-0.117	0.501	0.423	-0.024	0.074	1	0.02	0.00	0.00	
1C	55	-1.296	-1.251	-0.510	0.423	-0.181	0.668	1	0.02	0.00	0.02	
1D	55	-1.296	-0.117	-0.510	0.423	-0.181	0.074	1	0.02	0.00	0.01	
1E	55	1.127	-1.251	0.501	0.423	-0.024	0.668	1	0.02	0.00	0.02	
1F	55	1.127	-0.117	0.501	0.423	-0.024	0.074	1	0.02	0.00	0.00	
1G	55	1.127	-1.251	-0.510	0.423	-0.181	0.668	1	0.02	0.00	0.02	
1H	55	1.127	-0.117	-0.510	0.423	-0.181	0.074	1	0.02	0.00	0.01	
1I	55	-1.327	-1.075	0.593	0.426	0.007	0.577	1	0.02	0.00	0.02	
1J	55	-1.327	-0.293	0.593	0.426	0.007	0.165	1	0.02	0.00	0.01	
1K	55	-1.327	-1.075	-0.602	0.426	-0.211	0.577	1	0.02	0.00	0.02	
1L	55	-1.327	-0.293	-0.602	0.426	-0.211	0.165	1	0.02	0.00	0.01	
1M	55	1.158	-1.075	0.593	0.426	0.007	0.577	1	0.02	0.00	0.02	
1N	55	1.158	-0.293	0.593	0.426	0.007	0.165	1	0.02	0.00	0.01	
1O	55	1.158	-1.075	-0.602	0.426	-0.211	0.577	1	0.02	0.00	0.02	
1P	55	1.158	-0.293	-0.602	0.426	-0.211	0.165	1	0.02	0.00	0.01	
2	55	-0.101	-3.518	-0.012	-0.064	-0.192	1.859	1	0.02	0.00	0.06	
7	55	2.370	-1.708	-1.007	0.004	-0.364	0.903	1	0.01	0.00	0.03	
1A	109	-1.296	-1.350	0.501	0.423	-0.299	-0.041	1	0.02	0.00	0.01	
1B	109	-1.296	-0.216	0.501	0.423	-0.299	-0.017	1	0.02	0.00	0.01	
1C	109	-1.296	-1.350	-0.510	0.423	0.100	-0.041	1	0.02	0.00	0.00	
1D	109	-1.296	-0.216	-0.510	0.423	0.100	-0.017	1	0.02	0.00	0.00	
1E	109	1.127	-1.350	0.501	0.423	-0.299	-0.041	1	0.02	0.00	0.01	
1F	109	1.127	-0.216	0.501	0.423	-0.299	-0.017	1	0.02	0.00	0.01	
1G	109	1.127	-1.350	-0.510	0.423	0.100	-0.041	1	0.02	0.00	0.00	
1H	109	1.127	-0.216	-0.510	0.423	0.100	-0.017	1	0.02	0.00	0.00	
1I	109	-1.327	-1.174	0.593	0.426	-0.319	-0.036	1	0.02	0.00	0.01	
1J	109	-1.327	-0.392	0.593	0.426	-0.319	-0.022	1	0.02	0.00	0.01	
1K	109	-1.327	-1.174	-0.602	0.426	0.119	-0.036	1	0.02	0.00	0.01	
1L	109	-1.327	-0.392	-0.602	0.426	0.119	-0.022	1	0.02	0.00	0.01	
1M	109	1.158	-1.174	0.593	0.426	-0.319	-0.036	1	0.02	0.00	0.01	
1N	109	1.158	-0.392	0.593	0.426	-0.319	-0.022	1	0.02	0.00	0.01	

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

10	109	1.158	-1.174	-0.602	0.426	0.119	-0.036	1	0.02	0.00	0.01
1P	109	1.158	-0.392	-0.602	0.426	0.119	-0.022	1	0.02	0.00	0.01
2	109	-0.101	-3.647	-0.012	-0.064	-0.186	-0.093	1	0.02	0.00	0.01
7	109	2.370	-1.837	-1.007	0.004	0.185	-0.063	1	0.01	0.00	0.01

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-1.296	-0.299	1.322	1	0.9747	0.9992	0.9997	--	--	0.00	--	0.06	Snell. 'zx'= 27
1B	-1.296	-0.299	0.110	1	0.9747	0.9992	0.9998	--	--	0.00	--	0.02	Snell. 'zx'= 27
1C	-1.296	-0.462	1.322	1	0.9747	0.9998	0.9997	--	--	0.00	--	0.06	Snell. 'zx'= 27
1D	-1.296	-0.462	0.110	1	0.9747	0.9998	0.9998	--	--	0.00	--	0.03	Snell. 'zx'= 27
1E	1.127	-0.299	1.322	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1F	1.127	-0.299	0.110	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1G	1.127	-0.462	1.322	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1H	1.127	-0.462	0.110	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1I	-1.327	0.332	1.136	1	0.9747	0.9991	0.9997	--	--	0.00	--	0.05	Snell. 'zx'= 27
1J	-1.327	0.332	0.297	1	0.9747	0.9991	0.9998	--	--	0.00	--	0.03	Snell. 'zx'= 27
1K	-1.327	-0.541	1.136	1	0.9747	0.9997	0.9997	--	--	0.00	--	0.06	Snell. 'zx'= 27
1L	-1.327	-0.541	0.297	1	0.9747	0.9997	0.9998	--	--	0.00	--	0.03	Snell. 'zx'= 27
1M	1.158	0.332	1.136	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1N	1.158	0.332	0.297	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1O	1.158	-0.541	1.136	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
1P	1.158	-0.541	0.297	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27
2	-0.101	-0.199	3.741	1	0.9747	1.0001	1.0000	--	--	0.00	--	0.13	Snell. 'zx'= 27
7	2.370	-0.913	1.798	1	0.9747	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'= 27

**ASTA NUM. 91** NI 143 NF 121 Lungh. 84.7 cm SEZ. 12 Rf B= 0.100 H= 0.150 s= 0.005 r est.= 0.007 r int.= 0.005 m

categoria: p.p. y qy tot.  
qy medio: 0.16 0.16 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-5.090	3.585	4.088	1.117	0.874	-2.651	1	0.05	0.01	0.08	
1B	0	-5.090	6.327	4.088	1.117	0.874	-4.029	1	0.05	0.01	0.13	
1C	0	-5.090	3.585	1.030	1.117	-0.047	-2.651	1	0.05	0.01	0.08	
1D	0	-5.090	6.327	1.030	1.117	-0.047	-4.029	1	0.05	0.01	0.13	
1E	0	-1.906	3.585	4.088	1.117	0.874	-2.651	1	0.05	0.00	0.08	
1F	0	-1.906	6.327	4.088	1.117	0.874	-4.029	1	0.05	0.00	0.13	
1G	0	-1.906	3.585	1.030	1.117	-0.047	-2.651	1	0.05	0.00	0.08	
1H	0	-1.906	6.327	1.030	1.117	-0.047	-4.029	1	0.05	0.00	0.13	
1I	0	-5.783	3.845	5.310	1.307	1.131	-2.435	1	0.06	0.01	0.08	
1J	0	-5.783	6.067	5.310	1.307	1.131	-4.245	1	0.06	0.01	0.14	
1K	0	-5.783	3.845	-0.192	1.307	-0.304	-2.435	1	0.06	0.01	0.08	
1L	0	-5.783	6.067	-0.192	1.307	-0.304	-4.245	1	0.06	0.01	0.14	
1M	0	-1.213	3.845	5.310	1.307	1.131	-2.435	1	0.06	0.00	0.08	
1N	0	-1.213	6.067	5.310	1.307	1.131	-4.245	1	0.06	0.00	0.14	
1O	0	-1.213	3.845	-0.192	1.307	-0.304	-2.435	1	0.06	0.00	0.08	
1P	0	-1.213	6.067	-0.192	1.307	-0.304	-4.245	1	0.06	0.00	0.14	
2	0	-10.730	17.190	4.810	0.625	0.765	-10.490	1	0.08	0.02	0.34	
7	0	-5.062	10.730	7.110	-2.466	2.841	-7.054	1	0.12	0.01	0.23	
1A	42	-5.050	3.519	4.088	1.117	-0.958	-1.229	1	0.05	0.01	0.04	
1B	42	-5.050	6.260	4.088	1.117	-0.958	-1.283	1	0.05	0.01	0.04	
1C	42	-5.050	3.519	1.030	1.117	-0.382	-1.229	1	0.05	0.01	0.04	
1D	42	-5.050	6.260	1.030	1.117	-0.382	-1.283	1	0.05	0.01	0.04	
1E	42	-1.867	3.519	4.088	1.117	-0.958	-1.229	1	0.05	0.00	0.04	
1F	42	-1.867	6.260	4.088	1.117	-0.958	-1.283	1	0.05	0.00	0.04	
1G	42	-1.867	3.519	1.030	1.117	-0.382	-1.229	1	0.05	0.00	0.04	
1H	42	-1.867	6.260	1.030	1.117	-0.382	-1.283	1	0.05	0.00	0.04	
1I	42	-5.743	3.779	5.310	1.307	-1.274	-1.021	1	0.06	0.01	0.05	
1J	42	-5.743	6.000	5.310	1.307	-1.274	-1.491	1	0.06	0.01	0.05	
1K	42	-5.743	3.779	-0.192	1.307	-0.066	-1.021	1	0.06	0.01	0.03	
1L	42	-5.743	6.000	-0.192	1.307	-0.066	-1.491	1	0.06	0.01	0.05	
1M	42	-1.174	3.779	5.310	1.307	-1.274	-1.021	1	0.06	0.00	0.05	
1N	42	-1.174	6.000	5.310	1.307	-1.274	-1.491	1	0.06	0.00	0.05	
1O	42	-1.174	3.779	-0.192	1.307	-0.066	-1.021	1	0.06	0.00	0.03	
1P	42	-1.174	6.000	-0.192	1.307	-0.066	-1.491	1	0.06	0.00	0.05	
2	42	-10.680	17.100	4.810	0.625	-1.272	-3.231	1	0.08	0.02	0.10	
7	42	-5.011	10.645	7.110	-2.466	-0.170	-2.528	1	0.12	0.01	0.08	
1A	85	-5.011	3.452	4.088	1.117	-2.791	0.165	1	0.05	0.01	0.12	
1B	85	-5.011	6.194	4.088	1.117	-2.791	1.435	1	0.05	0.01	0.12	
1C	85	-5.011	3.452	1.030	1.117	-0.717	0.165	1	0.05	0.01	0.03	
1D	85	-5.011	6.194	1.030	1.117	-0.717	1.435	1	0.05	0.01	0.05	
1E	85	-1.827	3.452	4.088	1.117	-2.791	0.165	1	0.05	0.00	0.12	
1F	85	-1.827	6.194	4.088	1.117	-2.791	1.435	1	0.05	0.00	0.12	
1G	85	-1.827	3.452	1.030	1.117	-0.717	0.165	1	0.05	0.00	0.03	
1H	85	-1.827	6.194	1.030	1.117	-0.717	1.435	1	0.05	0.00	0.05	
1I	85	-5.704	3.712	5.310	1.307	-3.680	0.365	1	0.06	0.01	0.16	
1J	85	-5.704	5.934	5.310	1.307	-3.680	1.235	1	0.06	0.01	0.16	
1K	85	-5.704	3.712	-0.192	1.307	0.172	0.365	1	0.06	0.01	0.01	
1L	85	-5.704	5.934	-0.192	1.307	0.172	1.235	1	0.06	0.01	0.04	
1M	85	-1.134	3.712	5.310	1.307	-3.680	0.365	1	0.06	0.00	0.16	
1N	85	-1.134	5.934	5.310	1.307	-3.680	1.235	1	0.06	0.00	0.16	
1O	85	-1.134	3.712	-0.192	1.307	0.172	0.365	1	0.06	0.00	0.01	
1P	85	-1.134	5.934	-0.192	1.307	0.172	1.235	1	0.06	0.00	0.04	
2	85	-10.630	17.010	4.810	0.625	-3.308	3.991	1	0.08	0.02	0.14	
7	85	-4.959	10.560	7.110	-2.466	-3.180	1.961	1	0.12	0.01	0.13	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

# Relazione di calcolo delle opere strutturali

## Riquilificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-5.090	-2.791	-2.651	1	0.9907	0.9988	0.9988	--	--	0.01	--	0.21	Snell. 'zx'= 21
1B	-5.090	-2.791	-4.029	1	0.9907	0.9988	0.9982	--	--	0.01	--	0.25	Snell. 'zx'= 21
1C	-5.090	-0.717	-2.651	1	0.9907	0.9998	0.9988	--	--	0.01	--	0.12	Snell. 'zx'= 21
1D	-5.090	-0.717	-4.029	1	0.9907	0.9998	0.9982	--	--	0.01	--	0.17	Snell. 'zx'= 21
1E	-1.906	-2.791	-2.651	1	0.9907	0.9995	0.9995	--	--	0.00	--	0.21	Snell. 'zx'= 21
1F	-1.906	-2.791	-4.029	1	0.9907	0.9995	0.9993	--	--	0.00	--	0.25	Snell. 'zx'= 21
1G	-1.906	-0.717	-2.651	1	0.9907	0.9999	0.9995	--	--	0.00	--	0.12	Snell. 'zx'= 21
1H	-1.906	-0.717	-4.029	1	0.9907	0.9999	0.9993	--	--	0.00	--	0.16	Snell. 'zx'= 21
1I	-5.783	-3.680	-2.435	1	0.9907	0.9986	0.9984	--	--	0.01	--	0.24	Snell. 'zx'= 21
1J	-5.783	-3.680	-4.245	1	0.9907	0.9986	0.9981	--	--	0.01	--	0.30	Snell. 'zx'= 21
1K	-5.783	-0.304	-2.435	1	0.9907	0.9978	0.9984	--	--	0.01	--	0.10	Snell. 'zx'= 21
1L	-5.783	-0.304	-4.245	1	0.9907	0.9978	0.9981	--	--	0.01	--	0.16	Snell. 'zx'= 21
1M	-1.213	-3.680	-2.435	1	0.9907	0.9997	0.9997	--	--	0.00	--	0.24	Snell. 'zx'= 21
1N	-1.213	-3.680	-4.245	1	0.9907	0.9997	0.9996	--	--	0.00	--	0.29	Snell. 'zx'= 21
1O	-1.213	-0.304	-2.435	1	0.9907	0.9995	0.9997	--	--	0.00	--	0.09	Snell. 'zx'= 21
1P	-1.213	-0.304	-4.245	1	0.9907	0.9995	0.9996	--	--	0.00	--	0.15	Snell. 'zx'= 21
2	-10.730	-3.308	-10.490	1	0.9907	0.9978	0.9961	--	--	0.02	--	0.49	Snell. 'zx'= 21
7	-5.062	-3.180	-7.054	1	0.9907	0.9972	0.9984	--	--	0.01	--	0.37	Snell. 'zx'= 21

**ASTA NUM. 92** NI 142 NF 176 Lungh. 144.5 cm SEZ. 12 Rf B= 0.100 H= 0.150 s= 0.005 r est.= 0.007 r int.= 0.005 m

categoria: p.p. y qy tot.

qy medio: 0.16 0.16 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-5.497	-0.293	0.728	0.836	0.277	-0.007	1	0.04	0.01	0.01	
1B	0	-5.497	0.677	0.728	0.836	0.277	-0.475	1	0.04	0.01	0.02	
1C	0	-5.497	-0.293	-1.937	0.836	-1.034	-0.007	1	0.04	0.01	0.04	
1D	0	-5.497	0.677	-1.937	0.836	-1.034	-0.475	1	0.04	0.01	0.04	
1E	0	-1.055	-0.293	0.728	0.836	0.277	-0.007	1	0.04	0.00	0.01	
1F	0	-1.055	0.677	0.728	0.836	0.277	-0.475	1	0.04	0.00	0.02	
1G	0	-1.055	-0.293	-1.937	0.836	-1.034	-0.007	1	0.04	0.00	0.04	
1H	0	-1.055	0.677	-1.937	0.836	-1.034	-0.475	1	0.04	0.00	0.04	
1I	0	-5.511	-0.236	1.281	1.065	0.991	-0.059	1	0.05	0.01	0.04	
1J	0	-5.511	0.620	1.281	1.065	0.991	-0.423	1	0.05	0.01	0.04	
1K	0	-5.511	-0.236	-2.491	1.065	-1.748	-0.059	1	0.05	0.01	0.07	
1L	0	-5.511	0.620	-2.491	1.065	-1.748	-0.423	1	0.05	0.01	0.07	
1M	0	-1.041	-0.236	1.281	1.065	0.991	-0.059	1	0.05	0.00	0.04	
1N	0	-1.041	0.620	1.281	1.065	0.991	-0.423	1	0.05	0.00	0.04	
1O	0	-1.041	-0.236	-2.491	1.065	-1.748	-0.059	1	0.05	0.00	0.07	
1P	0	-1.041	0.620	-2.491	1.065	-1.748	-0.423	1	0.05	0.00	0.07	
2	0	-14.980	1.581	-1.108	1.045	-0.691	-1.249	1	0.05	0.02	0.04	
7	0	-14.200	1.418	-0.283	4.225	-1.837	-0.853	1	0.20	0.02	0.08	

1A	72	-5.430	-0.406	0.728	0.836	-0.351	-0.285	1	0.04	0.01	0.01	
1B	72	-5.430	0.563	0.728	0.836	-0.351	-0.002	1	0.04	0.01	0.01	
1C	72	-5.430	-0.406	-1.937	0.836	0.469	-0.285	1	0.04	0.01	0.02	
1D	72	-5.430	0.563	-1.937	0.836	0.469	-0.002	1	0.04	0.01	0.02	
1E	72	-0.987	-0.406	0.728	0.836	-0.351	-0.285	1	0.04	0.00	0.01	
1F	72	-0.987	0.563	0.728	0.836	-0.351	-0.002	1	0.04	0.00	0.01	
1G	72	-0.987	-0.406	-1.937	0.836	0.469	-0.285	1	0.04	0.00	0.02	
1H	72	-0.987	0.563	-1.937	0.836	0.469	-0.002	1	0.04	0.00	0.02	
1I	72	-5.444	-0.350	1.281	1.065	-0.193	-0.322	1	0.05	0.01	0.01	
1J	72	-5.444	0.507	1.281	1.065	-0.193	0.035	1	0.05	0.01	0.01	
1K	72	-5.444	-0.350	-2.491	1.065	0.311	-0.322	1	0.05	0.01	0.01	
1L	72	-5.444	0.507	-2.491	1.065	0.311	0.035	1	0.05	0.01	0.01	
1M	72	-0.973	-0.350	1.281	1.065	-0.193	-0.322	1	0.05	0.00	0.01	
1N	72	-0.973	0.507	1.281	1.065	-0.193	0.035	1	0.05	0.00	0.01	
1O	72	-0.973	-0.350	-2.491	1.065	0.311	-0.322	1	0.05	0.00	0.01	
1P	72	-0.973	0.507	-2.491	1.065	0.311	0.035	1	0.05	0.00	0.01	
2	72	-14.895	1.434	-1.108	1.045	0.109	-0.160	1	0.05	0.02	0.01	
7	72	-14.110	1.271	-0.283	4.225	-1.633	0.119	1	0.20	0.02	0.07	

1A	144	-5.362	-0.520	0.728	0.836	-0.979	-0.645	1	0.04	0.01	0.04	
1B	144	-5.362	0.450	0.728	0.836	-0.979	0.390	1	0.04	0.01	0.04	
1C	144	-5.362	-0.520	-1.937	0.836	1.971	-0.645	1	0.04	0.01	0.08	
1D	144	-5.362	0.450	-1.937	0.836	1.971	0.390	1	0.04	0.01	0.08	
1E	144	-0.920	-0.520	0.728	0.836	-0.979	-0.645	1	0.04	0.00	0.04	
1F	144	-0.920	0.450	0.728	0.836	-0.979	0.390	1	0.04	0.00	0.04	
1G	144	-0.920	-0.520	-1.937	0.836	1.971	-0.645	1	0.04	0.00	0.08	
1H	144	-0.920	0.450	-1.937	0.836	1.971	0.390	1	0.04	0.00	0.08	
1I	144	-5.376	-0.463	1.281	1.065	-1.378	-0.667	1	0.05	0.01	0.06	
1J	144	-5.376	0.393	1.281	1.065	-1.378	0.411	1	0.05	0.01	0.06	
1K	144	-5.376	-0.463	-2.491	1.065	2.370	-0.667	1	0.05	0.01	0.10	
1L	144	-5.376	0.393	-2.491	1.065	2.370	0.411	1	0.05	0.01	0.10	
1M	144	-0.906	-0.463	1.281	1.065	-1.378	-0.667	1	0.05	0.00	0.06	
1N	144	-0.906	0.393	1.281	1.065	-1.378	0.411	1	0.05	0.00	0.06	
1O	144	-0.906	-0.463	-2.491	1.065	2.370	-0.667	1	0.05	0.00	0.10	
1P	144	-0.906	0.393	-2.491	1.065	2.370	0.411	1	0.05	0.00	0.10	
2	144	-14.810	1.286	-1.108	1.045	0.909	0.822	1	0.05	0.02	0.04	
7	144	-14.020	1.123	-0.283	4.225	-1.428	0.983	1	0.20	0.02	0.06	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	$\chi_{min.}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-5.497	-0.979	-0.645	1	0.9493	0.9987	0.9995	--	--	0.01	--	0.07	Snell. 'zx'= 36
1B	-5.497	-0.979	-0.475	1	0.9493	0.9987	0.9966	--	--	0.01	--	0.07	Snell. 'zx'= 36

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1C	-5.497	1.971	-0.645	1	0.9493	0.9975	0.9995	--	--	0.01	--	0.11	Snell.	'zx'='	36
1D	-5.497	1.971	-0.475	1	0.9493	0.9975	0.9966	--	--	0.01	--	0.11	Snell.	'zx'='	36
1E	-1.055	-0.979	-0.645	1	0.9493	0.9998	0.9999	--	--	0.00	--	0.06	Snell.	'zx'='	36
1F	-1.055	-0.979	-0.475	1	0.9493	0.9998	0.9993	--	--	0.00	--	0.06	Snell.	'zx'='	36
1G	-1.055	1.971	-0.645	1	0.9493	0.9995	0.9999	--	--	0.00	--	0.11	Snell.	'zx'='	36
1H	-1.055	1.971	-0.475	1	0.9493	0.9995	0.9993	--	--	0.00	--	0.10	Snell.	'zx'='	36
1I	-5.511	-1.378	-0.667	1	0.9493	0.9964	0.9997	--	--	0.01	--	0.09	Snell.	'zx'='	36
1J	-5.511	-1.378	-0.423	1	0.9493	0.9964	0.9961	--	--	0.01	--	0.08	Snell.	'zx'='	36
1K	-5.511	2.370	-0.667	1	0.9493	0.9964	0.9997	--	--	0.01	--	0.13	Snell.	'zx'='	36
1L	-5.511	2.370	-0.423	1	0.9493	0.9964	0.9961	--	--	0.01	--	0.12	Snell.	'zx'='	36
1M	-1.041	-1.378	-0.667	1	0.9493	0.9993	0.9999	--	--	0.00	--	0.08	Snell.	'zx'='	36
1N	-1.041	-1.378	-0.423	1	0.9493	0.9993	0.9993	--	--	0.00	--	0.07	Snell.	'zx'='	36
1O	-1.041	2.370	-0.667	1	0.9493	0.9993	0.9999	--	--	0.00	--	0.12	Snell.	'zx'='	36
1P	-1.041	2.370	-0.423	1	0.9493	0.9993	0.9993	--	--	0.00	--	0.12	Snell.	'zx'='	36
2	-14.980	0.909	-1.249	1	0.9493	0.9898	0.9917	--	--	0.03	--	0.10	Snell.	'zx'='	36
7	-14.200	-1.837	0.983	1	0.9493	1.0107	0.9902	--	--	0.02	--	0.13	Snell.	'zx'='	36

**ASTA NUM. 93** NI 176 NF 105 Lunghezza 112.5 cm SEZ. 12 Rf B= 0.100 H= 0.150 s= 0.005 r est.= 0.007 r int.= 0.005 m

categoria: p.p. y qy tot.  
qy medio: 0.18 0.18 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--
	cm	kN			kN*m							
1A	0	-1.693	-0.214	0.395	0.382	0.358	0.348	1	0.02	0.00	0.02	
1B	0	-1.693	0.697	0.395	0.382	0.358	-0.670	1	0.02	0.00	0.02	
1C	0	-1.693	-0.214	-0.909	0.382	-0.581	0.348	1	0.02	0.00	0.02	
1D	0	-1.693	0.697	-0.909	0.382	-0.581	-0.670	1	0.02	0.00	0.02	
1E	0	0.289	-0.214	0.395	0.382	0.358	0.348	1	0.02	0.00	0.02	
1F	0	0.289	0.697	0.395	0.382	0.358	-0.670	1	0.02	0.00	0.02	
1G	0	0.289	-0.214	-0.909	0.382	-0.581	0.348	1	0.02	0.00	0.02	
1H	0	0.289	0.697	-0.909	0.382	-0.581	-0.670	1	0.02	0.00	0.02	
1I	0	-1.634	-0.236	0.526	0.316	0.470	0.372	1	0.02	0.00	0.02	
1J	0	-1.634	0.719	0.526	0.316	0.470	-0.695	1	0.02	0.00	0.02	
1K	0	-1.634	-0.236	-1.041	0.316	-0.693	0.372	1	0.02	0.00	0.03	
1L	0	-1.634	0.719	-1.041	0.316	-0.693	-0.695	1	0.02	0.00	0.03	
1M	0	0.230	-0.236	0.526	0.316	0.470	0.372	1	0.02	0.00	0.02	
1N	0	0.230	0.719	0.526	0.316	0.470	-0.695	1	0.02	0.00	0.02	
1O	0	0.230	-0.236	-1.041	0.316	-0.693	0.372	1	0.02	0.00	0.03	
1P	0	0.230	0.719	-1.041	0.316	-0.693	-0.695	1	0.02	0.00	0.03	
2	0	-2.695	-0.531	-0.240	0.217	-0.062	0.723	1	0.01	0.00	0.02	
7	0	-4.393	-0.692	-0.516	0.306	-0.278	0.909	1	0.01	0.01	0.03	
1A	56	-1.693	-0.317	0.395	0.382	0.132	0.198	1	0.02	0.00	0.01	
1B	56	-1.693	0.595	0.395	0.382	0.132	-0.306	1	0.02	0.00	0.01	
1C	56	-1.693	-0.317	-0.909	0.382	-0.066	0.198	1	0.02	0.00	0.01	
1D	56	-1.693	0.595	-0.909	0.382	-0.066	-0.306	1	0.02	0.00	0.01	
1E	56	0.288	-0.317	0.395	0.382	0.132	0.198	1	0.02	0.00	0.01	
1F	56	0.288	0.595	0.395	0.382	0.132	-0.306	1	0.02	0.00	0.01	
1G	56	0.288	-0.317	-0.909	0.382	-0.066	0.198	1	0.02	0.00	0.01	
1H	56	0.288	0.595	-0.909	0.382	-0.066	-0.306	1	0.02	0.00	0.01	
1I	56	-1.634	-0.338	0.526	0.316	0.172	0.210	1	0.02	0.00	0.01	
1J	56	-1.634	0.616	0.526	0.316	0.172	-0.319	1	0.02	0.00	0.01	
1K	56	-1.634	-0.338	-1.041	0.316	-0.106	0.210	1	0.02	0.00	0.01	
1L	56	-1.634	0.616	-1.041	0.316	-0.106	-0.319	1	0.02	0.00	0.01	
1M	56	0.229	-0.338	0.526	0.316	0.172	0.210	1	0.02	0.00	0.01	
1N	56	0.229	0.616	0.526	0.316	0.172	-0.319	1	0.02	0.00	0.01	
1O	56	0.229	-0.338	-1.041	0.316	-0.106	0.210	1	0.02	0.00	0.01	
1P	56	0.229	0.616	-1.041	0.316	-0.106	-0.319	1	0.02	0.00	0.01	
2	56	-2.696	-0.664	-0.240	0.217	0.073	0.387	1	0.01	0.00	0.01	
7	56	-4.394	-0.826	-0.516	0.306	0.012	0.482	1	0.01	0.01	0.02	
1A	113	-1.694	-0.420	0.395	0.382	-0.094	-0.010	1	0.02	0.00	0.00	
1B	113	-1.694	0.492	0.395	0.382	-0.094	0.000	1	0.02	0.00	0.00	
1C	113	-1.694	-0.420	-0.909	0.382	0.449	-0.010	1	0.02	0.00	0.02	
1D	113	-1.694	0.492	-0.909	0.382	0.449	0.000	1	0.02	0.00	0.02	
1E	113	0.287	-0.420	0.395	0.382	-0.094	-0.010	1	0.02	0.00	0.00	
1F	113	0.287	0.492	0.395	0.382	-0.094	0.000	1	0.02	0.00	0.00	
1G	113	0.287	-0.420	-0.909	0.382	0.449	-0.010	1	0.02	0.00	0.02	
1H	113	0.287	0.492	-0.909	0.382	0.449	0.000	1	0.02	0.00	0.02	
1I	113	-1.635	-0.441	0.526	0.316	-0.126	-0.010	1	0.02	0.00	0.01	
1J	113	-1.635	0.513	0.526	0.316	-0.126	-0.001	1	0.02	0.00	0.01	
1K	113	-1.635	-0.441	-1.041	0.316	0.481	-0.010	1	0.02	0.00	0.02	
1L	113	-1.635	0.513	-1.041	0.316	0.481	-0.001	1	0.02	0.00	0.02	
1M	113	0.228	-0.441	0.526	0.316	-0.126	-0.010	1	0.02	0.00	0.01	
1N	113	0.228	0.513	0.526	0.316	-0.126	-0.001	1	0.02	0.00	0.01	
1O	113	0.228	-0.441	-1.041	0.316	0.481	-0.010	1	0.02	0.00	0.02	
1P	113	0.228	0.513	-1.041	0.316	0.481	-0.001	1	0.02	0.00	0.02	
2	113	-2.697	-0.798	-0.240	0.217	0.208	-0.025	1	0.01	0.00	0.01	
7	113	-4.395	-0.960	-0.516	0.306	0.303	-0.020	1	0.01	0.01	0.01	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	k <sub>LT</sub>	χ <sub>LT</sub>	I.S.n.	I.S.m.	I.S.	Nota
--	--	--	--	--	--	--	--	--	--	--	--	--	--
	kN	kN*m											
1A	-1.694	0.358	0.348	1	0.9723	0.9996	0.9997	--	--	0.00	--	0.03	Snell. 'zx'=' 28
1B	-1.694	0.358	-0.670	1	0.9723	0.9996	0.9997	--	--	0.00	--	0.04	Snell. 'zx'=' 28
1C	-1.694	-0.581	0.348	1	0.9723	0.9990	0.9997	--	--	0.00	--	0.04	Snell. 'zx'=' 28
1D	-1.694	-0.581	-0.670	1	0.9723	0.9990	0.9997	--	--	0.00	--	0.05	Snell. 'zx'=' 28
1E	0.289	0.358	0.348	1	0.9723	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'=' 28
1F	0.289	0.358	-0.670	1	0.9723	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'=' 28
1G	0.289	-0.581	0.348	1	0.9723	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'=' 28
1H	0.289	-0.581	-0.670	1	0.9723	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'=' 28
1I	-1.635	0.470	0.372	1	0.9723	0.9996	0.9997	--	--	0.00	--	0.03	Snell. 'zx'=' 28
1J	-1.635	0.470	-0.695	1	0.9723	0.9996	0.9997	--	--	0.00	--	0.04	Snell. 'zx'=' 28

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1K	-1.635	-0.693	0.372	1	0.9723	0.9991	0.9997	--	--	0.00	--	0.04	Snell. 'zx'=' 28
1L	-1.635	-0.693	-0.695	1	0.9723	0.9991	0.9997	--	--	0.00	--	0.05	Snell. 'zx'=' 28
1M	0.230	0.470	0.372	1	0.9723	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'=' 28
1N	0.230	0.470	-0.695	1	0.9723	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'=' 28
1O	0.230	-0.693	0.372	1	0.9723	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'=' 28
1P	0.230	-0.693	-0.695	1	0.9723	0.0000	0.0000	--	--	--	--	--	Snell. 'zx'=' 28
2	-2.697	0.208	0.723	1	0.9723	0.9993	0.9995	--	--	0.00	--	0.04	Snell. 'zx'=' 28
7	-4.395	0.303	0.909	1	0.9723	0.9970	0.9992	--	--	0.01	--	0.05	Snell. 'zx'=' 28

**ASTA NUM. 94** NI 104 NF 171 Lunghezza 10.0 cm SEZ. 1 Ps L 200X 90X 10

categoria: p.p. y Permanente qy tot.

qy medio: 0.22 1.00 1.22 kN/m

Sollecitazioni di calcolo e di verifica

Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
--	cm	kN			kN*m			--	--	--	--	--
1A	0	-1.674	2.294	0.511	0.000	0.049	-1.302	1	0.01	0.00	0.04	
1B	0	-1.674	3.344	0.511	0.000	0.049	-1.952	1	0.01	0.00	0.05	
1C	0	-1.674	2.294	-3.825	0.000	-0.264	-1.302	4	0.03	0.00	0.11	
1D	0	-1.674	3.344	-3.825	0.000	-0.264	-1.952	4	0.03	0.00	0.13	
1E	0	9.042	2.294	0.511	0.000	0.049	-1.302	3	0.01	0.02	0.07	
1F	0	9.042	3.344	0.511	0.000	0.049	-1.952	3	0.01	0.02	0.10	
1G	0	9.042	2.294	-3.825	0.000	-0.264	-1.302	4	0.03	0.02	0.11	
1H	0	9.042	3.344	-3.825	0.000	-0.264	-1.952	4	0.03	0.02	0.14	
1I	0	-0.938	2.304	2.542	0.000	0.111	-1.299	1	0.02	0.00	0.04	
1J	0	-0.938	3.334	2.542	0.000	0.111	-1.955	1	0.02	0.00	0.05	
1K	0	-0.938	2.304	-5.856	0.000	-0.326	-1.299	4	0.04	0.00	0.11	
1L	0	-0.938	3.334	-5.856	0.000	-0.326	-1.955	4	0.04	0.00	0.14	
1M	0	8.306	2.304	2.542	0.000	0.111	-1.299	3	0.02	0.02	0.08	
1N	0	8.306	3.334	2.542	0.000	0.111	-1.955	3	0.02	0.02	0.11	
1O	0	8.306	2.304	-5.856	0.000	-0.326	-1.299	4	0.04	0.02	0.12	
1P	0	8.306	3.334	-5.856	0.000	-0.326	-1.955	4	0.04	0.02	0.15	
2	0	4.880	5.947	-1.667	0.000	-0.112	-2.753	4	0.02	0.01	0.14	
7	0	5.752	3.926	-6.193	0.000	-0.290	-2.409	4	0.05	0.01	0.16	
1A	5	-1.674	2.233	0.511	0.000	0.008	-1.162	4	0.01	0.00	0.05	
1B	5	-1.674	3.283	0.511	0.000	0.008	-1.814	4	0.01	0.00	0.08	
1C	5	-1.674	2.233	-3.825	0.000	-0.057	-1.162	4	0.03	0.00	0.06	
1D	5	-1.674	3.283	-3.825	0.000	-0.057	-1.814	4	0.03	0.00	0.09	
1E	5	9.042	2.233	0.511	0.000	0.008	-1.162	3	0.01	0.02	0.06	
1F	5	9.042	3.283	0.511	0.000	0.008	-1.814	3	0.01	0.02	0.09	
1G	5	9.042	2.233	-3.825	0.000	-0.057	-1.162	3	0.03	0.02	0.07	
1H	5	9.042	3.283	-3.825	0.000	-0.057	-1.814	3	0.03	0.02	0.10	
1I	5	-0.938	2.243	2.542	0.000	-0.024	-1.157	4	0.02	0.00	0.06	
1J	5	-0.938	3.273	2.542	0.000	-0.024	-1.819	4	0.02	0.00	0.08	
1K	5	-0.938	2.243	-5.856	0.000	-0.025	-1.157	4	0.04	0.00	0.06	
1L	5	-0.938	3.273	-5.856	0.000	-0.025	-1.819	4	0.04	0.00	0.08	
1M	5	8.306	2.243	2.542	0.000	-0.024	-1.157	3	0.02	0.02	0.06	
1N	5	8.306	3.273	2.542	0.000	-0.024	-1.819	3	0.02	0.02	0.09	
1O	5	8.306	2.243	-5.856	0.000	-0.025	-1.157	3	0.04	0.02	0.06	
1P	5	8.306	3.273	-5.856	0.000	-0.025	-1.819	3	0.04	0.02	0.09	
2	5	4.880	5.868	-1.667	0.000	-0.028	-2.458	1	0.02	0.01	0.07	
7	5	5.752	3.847	-6.193	0.000	0.020	-2.215	1	0.05	0.01	0.06	
1A	10	-1.674	2.172	0.511	0.000	-0.033	-1.024	4	0.01	0.00	0.05	
1B	10	-1.674	3.222	0.511	0.000	-0.033	-1.680	4	0.01	0.00	0.08	
1C	10	-1.674	2.172	-3.825	0.000	0.150	-1.024	1	0.03	0.00	0.04	
1D	10	-1.674	3.222	-3.825	0.000	0.150	-1.680	1	0.03	0.00	0.05	
1E	10	9.042	2.172	0.511	0.000	-0.033	-1.024	3	0.01	0.02	0.06	
1F	10	9.042	3.222	0.511	0.000	-0.033	-1.680	3	0.01	0.02	0.09	
1G	10	9.042	2.172	-3.825	0.000	0.150	-1.024	3	0.03	0.02	0.08	
1H	10	9.042	3.222	-3.825	0.000	0.150	-1.680	3	0.03	0.02	0.11	
1I	10	-0.938	2.182	2.542	0.000	-0.159	-1.019	4	0.02	0.00	0.07	
1J	10	-0.938	3.212	2.542	0.000	-0.159	-1.685	4	0.02	0.00	0.10	
1K	10	-0.938	2.182	-5.856	0.000	0.276	-1.019	1	0.04	0.00	0.05	
1L	10	-0.938	3.212	-5.856	0.000	0.276	-1.685	1	0.04	0.00	0.06	
1M	10	8.306	2.182	2.542	0.000	-0.159	-1.019	4	0.02	0.02	0.08	
1N	10	8.306	3.212	2.542	0.000	-0.159	-1.685	4	0.02	0.02	0.11	
1O	10	8.306	2.182	-5.856	0.000	0.276	-1.019	3	0.04	0.02	0.10	
1P	10	8.306	3.212	-5.856	0.000	0.276	-1.685	3	0.04	0.02	0.13	
2	10	4.880	5.789	-1.667	0.000	0.055	-2.166	1	0.02	0.01	0.06	
7	10	5.752	3.768	-6.193	0.000	0.330	-2.025	3	0.05	0.01	0.15	

**Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE**

NC	Fx	My	Mz	Classe	γ <sub>min.</sub>	ky	kz	k <sub>LT</sub>	χ <sub>LT</sub>	I.S.n.	I.S.m.	I.S.	Nota
--	kN	kN*m			--	--	--	--	--	--	--	--	--
1A	-1.674	0.049	-1.302	4	0.8224	0.9992	1.0020	--	--	0.00	--	0.07	Snell.imin= 5
1B	-1.674	0.049	-1.952	4	0.8224	0.9992	1.0021	--	--	0.00	--	0.09	Snell.imin= 5
1C	-1.674	-0.264	-1.302	4	0.8224	0.9994	1.0020	--	--	0.00	--	0.10	Snell.imin= 5
1D	-1.674	-0.264	-1.952	4	0.8224	0.9994	1.0021	--	--	0.00	--	0.13	Snell.imin= 5
1E	9.042	0.049	-1.302	3	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1F	9.042	0.049	-1.952	3	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1G	9.042	-0.264	-1.302	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1H	9.042	-0.264	-1.952	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1I	-0.938	-0.159	-1.299	4	0.8224	0.9995	1.0011	--	--	0.00	--	0.08	Snell.imin= 5
1J	-0.938	-0.159	-1.955	4	0.8224	0.9995	1.0012	--	--	0.00	--	0.11	Snell.imin= 5
1K	-0.938	-0.326	-1.299	4	0.8224	0.9994	1.0011	--	--	0.00	--	0.11	Snell.imin= 5
1L	-0.938	-0.326	-1.955	4	0.8224	0.9994	1.0012	--	--	0.00	--	0.14	Snell.imin= 5
1M	8.306	-0.159	-1.299	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1N	8.306	-0.159	-1.955	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1O	8.306	-0.326	-1.299	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
1P	8.306	-0.326	-1.955	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
2	4.880	-0.112	-2.753	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5
7	5.752	0.330	-2.409	4	0.8224	0.0000	0.0000	--	--	--	--	--	Snell.imin= 5





# Relazione di calcolo delle opere strutturali

## Riquilificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Lavoro: **Scala rev** Intestazione lavoro: **Scala**  
 Elemento: **TRAVE** Metodo di verifica: **Eurocodice 3 - NTC 2018**  
 Gruppo: **5** Descrizione: **0005**  
 Tabella: **Tabella pilastri**  
 Tipo acciaio: **S 275** Beta piano 'yx': **1.000** Beta piano 'zx': **1.000**  
 Coeff. k: **1.000** Coeff. kw: **1.000** Carico all'estradosso della trave  
 Tipologia sismica yx: **Senza prescrizioni aggiuntive**  
 Tipologia sismica zx: **Senza prescrizioni aggiuntive**  
 $\gamma_{M0}$ : **1.050**  $\gamma_{M1}$ : **1.050**  $\gamma_{M1}$ ': **1.050**  $\gamma_{M2}$ : **1.250**  $\gamma_{rv}$ : **0.000**  $\gamma_{M0}$  Pf: **1.000**  $\gamma_{M1}$  Pf: **1.000**  
 Tipo collegamento: **saldato** Connessione su un solo lato Connessione sul lato corto (solo 'L')

**ASTA NUM. 1** NI 172 NF 32 Lungh. 71.1 cm SEZ. 1 Ps L 200X 90X 10  
 Sollecitazioni di calcolo e di verifica Indici <= 1 : VERIFICATO

NC	x	Fx	Fy	Fz	Mx	My	Mz	Classe	I.V.T.	I.R.n.	I.R.	Nota
	cm	kN			kN*m							
1A	0	-7.494	-6.780	0.715	0.000	0.526	2.197	1	0.02	0.01	0.10	
1B	0	-7.494	2.458	0.715	0.000	0.526	-3.099	1	0.01	0.01	0.12	
1C	0	-7.494	-6.780	-0.639	0.000	-0.463	2.197	4	0.02	0.01	0.22	
1D	0	-7.494	2.458	-0.639	0.000	-0.463	-3.099	4	0.01	0.01	0.23	
1E	0	-0.388	-6.780	0.715	0.000	0.526	2.197	1	0.02	0.00	0.09	
1F	0	-0.388	2.458	0.715	0.000	0.526	-3.099	1	0.01	0.00	0.11	
1G	0	-0.388	-6.780	-0.639	0.000	-0.463	2.197	4	0.02	0.00	0.22	
1H	0	-0.388	2.458	-0.639	0.000	-0.463	-3.099	4	0.01	0.00	0.21	
1I	0	-8.485	-9.071	1.585	0.000	1.168	3.490	1	0.03	0.01	0.18	
1J	0	-8.485	4.749	1.585	0.000	1.168	-4.391	1	0.02	0.01	0.20	
1K	0	-8.485	-9.071	-1.509	0.000	-1.105	3.490	4	0.03	0.01	0.42	
1L	0	-8.485	4.749	-1.509	0.000	-1.105	-4.391	4	0.02	0.01	0.40	
1M	0	0.603	-9.071	1.585	0.000	1.168	3.490	1	0.03	0.00	0.17	
1N	0	0.603	4.749	1.585	0.000	1.168	-4.391	1	0.02	0.00	0.19	
1O	0	0.603	-9.071	-1.509	0.000	-1.105	3.490	4	0.03	0.00	0.41	
1P	0	0.603	4.749	-1.509	0.000	-1.105	-4.391	4	0.02	0.00	0.38	
2	0	-7.032	-3.894	0.071	0.000	0.059	-1.116	3	0.01	0.01	0.07	
7	0	-17.030	-13.320	0.027	0.000	0.030	2.223	4	0.04	0.03	0.14	
1A	36	-7.417	-6.780	0.715	0.000	0.273	-0.605	3	0.02	0.01	0.08	
1B	36	-7.417	2.458	0.715	0.000	0.273	-1.834	3	0.01	0.01	0.13	
1C	36	-7.417	-6.780	-0.639	0.000	-0.236	-0.605	4	0.02	0.01	0.09	
1D	36	-7.417	2.458	-0.639	0.000	-0.236	-1.834	4	0.01	0.01	0.14	
1E	36	-0.311	-6.780	0.715	0.000	0.273	-0.605	1	0.02	0.00	0.03	
1F	36	-0.311	2.458	0.715	0.000	0.273	-1.834	1	0.01	0.00	0.06	
1G	36	-0.311	-6.780	-0.639	0.000	-0.236	-0.605	4	0.02	0.00	0.07	
1H	36	-0.311	2.458	-0.639	0.000	-0.236	-1.834	4	0.01	0.00	0.12	
1I	36	-8.408	-9.071	1.585	0.000	0.605	0.052	4	0.03	0.01	0.06	
1J	36	-8.408	4.749	1.585	0.000	0.605	-2.490	3	0.02	0.01	0.22	
1K	36	-8.408	-9.071	-1.509	0.000	-0.569	0.052	4	0.03	0.01	0.13	
1L	36	-8.408	4.749	-1.509	0.000	-0.569	-2.490	4	0.02	0.01	0.23	
1M	36	0.680	-9.071	1.585	0.000	0.605	0.052	4	0.03	0.00	0.04	
1N	36	0.680	4.749	1.585	0.000	0.605	-2.490	1	0.02	0.00	0.10	
1O	36	0.680	-9.071	-1.509	0.000	-0.569	0.052	4	0.03	0.00	0.10	
1P	36	0.680	4.749	-1.509	0.000	-0.569	-2.490	4	0.02	0.00	0.20	
2	36	-6.932	-3.894	0.071	0.000	0.034	-2.501	4	0.01	0.01	0.12	
7	36	-16.930	-13.320	0.027	0.000	0.020	-2.514	4	0.04	0.03	0.15	
1A	71	-7.340	-6.780	0.715	0.000	0.019	-3.407	4	0.02	0.01	0.16	
1B	71	-7.340	2.458	0.715	0.000	0.019	-0.569	4	0.01	0.01	0.04	
1C	71	-7.340	-6.780	-0.639	0.000	-0.010	-3.407	4	0.02	0.01	0.17	
1D	71	-7.340	2.458	-0.639	0.000	-0.010	-0.569	4	0.01	0.01	0.05	
1E	71	-0.234	-6.780	0.715	0.000	0.019	-3.407	1	0.02	0.00	0.08	
1F	71	-0.234	2.458	0.715	0.000	0.019	-0.569	1	0.01	0.00	0.01	
1G	71	-0.234	-6.780	-0.639	0.000	-0.010	-3.407	4	0.02	0.00	0.14	
1H	71	-0.234	2.458	-0.639	0.000	-0.010	-0.569	4	0.01	0.00	0.03	
1I	71	-8.331	-9.071	1.585	0.000	0.042	-3.386	4	0.03	0.01	0.16	
1J	71	-8.331	4.749	1.585	0.000	0.042	-0.590	4	0.02	0.01	0.05	
1K	71	-8.331	-9.071	-1.509	0.000	-0.033	-3.386	4	0.03	0.01	0.17	
1L	71	-8.331	4.749	-1.509	0.000	-0.033	-0.590	4	0.02	0.01	0.06	
1M	71	0.757	-9.071	1.585	0.000	0.042	-3.386	1	0.03	0.00	0.08	
1N	71	0.757	4.749	1.585	0.000	0.042	-0.590	1	0.02	0.00	0.02	
1O	71	0.757	-9.071	-1.509	0.000	-0.033	-3.386	4	0.03	0.00	0.15	
1P	71	0.757	4.749	-1.509	0.000	-0.033	-0.590	4	0.02	0.00	0.03	
2	71	-6.832	-3.894	0.071	0.000	0.009	-3.885	4	0.01	0.01	0.18	
7	71	-16.830	-13.320	0.027	0.000	0.011	-7.251	4	0.04	0.03	0.35	

### Verifica di STABILITA' e/o STABILITA' FLESSO TORSIONALE

NC	Fx	My	Mz	Classe	$\gamma_{min}$	ky	kz	kLT	$\chi_{LT}$	I.S.n.	I.S.m.	I.S.	Nota
	kN	kN*m											
1A	-7.494	0.526	-3.407	4	0.7060	1.0057	0.9952	--	--	0.02	--	0.19	Snell.imin= 37
1B	-7.494	0.526	-3.099	4	0.7060	1.0057	1.0062	--	--	0.02	--	0.18	Snell.imin= 37
1C	-7.494	-0.463	-3.407	4	0.7060	1.0054	0.9952	--	--	0.02	--	0.19	Snell.imin= 37
1D	-7.494	-0.463	-3.099	4	0.7060	1.0054	1.0062	--	--	0.02	--	0.18	Snell.imin= 37
1E	-0.388	0.526	-3.407	1	0.6881	0.9993	0.9994	--	--	0.00	--	0.12	Snell.imin= 37
1F	-0.388	0.526	-3.099	1	0.6881	0.9993	0.9998	--	--	0.00	--	0.11	Snell.imin= 37
1G	-0.388	-0.463	-3.407	4	0.7060	1.0003	0.9998	--	--	0.00	--	0.17	Snell.imin= 37
1H	-0.388	-0.463	-3.099	4	0.7060	1.0003	1.0003	--	--	0.00	--	0.16	Snell.imin= 37
1I	-8.485	1.168	3.489	4	0.7060	1.0064	0.9897	--	--	0.02	--	0.22	Snell.imin= 37
1J	-8.485	1.168	-4.391	4	0.7060	1.0064	1.0063	--	--	0.02	--	0.28	Snell.imin= 37
1K	-8.485	-1.105	3.489	4	0.7060	1.0063	0.9897	--	--	0.02	--	0.22	Snell.imin= 37
1L	-8.485	-1.105	-4.391	4	0.7060	1.0063	1.0063	--	--	0.02	--	0.28	Snell.imin= 37
1M	0.757	1.168	3.489	4	0.7060	0.0000	0.0000	--	--	--	--	--	Snell.imin= 37

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

1N	0.757	1.168	-4.391	1	0.7060	0.0000	0.0000	--	--	--	--	--	Snell.imin=	37
1O	0.757	-1.105	3.489	4	0.7060	0.0000	0.0000	--	--	--	--	--	Snell.imin=	37
1P	0.757	-1.105	-4.391	4	0.7060	0.0000	0.0000	--	--	--	--	--	Snell.imin=	37
2	-7.032	0.059	-3.885	4	0.7060	1.0072	1.0071	--	--	0.02	--	0.19	Snell.imin=	37
7	-17.030	0.030	-7.251	4	0.7060	1.0262	0.9994	--	--	0.04	--	0.36	Snell.imin=	37

2.2.2.3 PLATEA

Lavoro: **Scala rev** Intestazione lavoro: **Scala**  
 Elem.: **GUSCIO (piastra)** Gruppo: **1** Tabella: **Tabella gusci**  
 Descrizione: **Platea**  
 Rck: **30.00** N/mm<sup>2</sup> fyk: **450.0** N/mm<sup>2</sup> Copriferro sup.: **3.0** cm Copriferro inf.: **3.0** cm  
 Coeff. di partecipazione Mxy: **0.50** Coeff. di partecipazione Sxy: **0.50**  
 dxx base sup.: **12** mm dxx base inf.: **12** mm pxx: **20** cm dxx agg.: **12** mm pxx agg.: **20** cm  
 dyy base sup.: **12** mm dyy base inf.: **12** mm pyy: **20** cm dyy agg.: **12** mm pyy agg.: **20** cm  
 Orientamento armature: **rif. globale** Angolo di posa delle armature: **0.00** gradi  
 Diametro staffe: **8** mm Numero braccia: **2**

Le armature longitudinali aggiuntive, riferite al proprio passo, vanno aggiunte all'armatura di base: vedere riga riassuntiva

El. comb.	Nxx	Mxx	Nyy	Myy	Vz (Mxx)	Vz (Myy)	Axx inf.	Axx sup.	Ayy inf.	Ayy sup.	Indice di resistenza		
	kN/20 cm	kN*m/20 cm	kN/20 cm	kN*m/20 cm	kN/m		cmq /20 cm		cmq /20 cm		N, M	txy	Vz/Vrdl
1 1A	-0.045	-1.659	-0.119	-0.738	14.766	6.006	1.13	1.13	1.13	1.13	0.15	0.00	0.12
1 1B	-0.232	-1.659	-0.211	-0.738	14.766	6.006	1.13	1.13	1.13	1.13	0.15	0.00	0.12
1 1C	-0.045	0.266	-0.119	0.780	14.766	6.006	1.13	1.13	1.13	1.13	0.07	0.00	0.12
1 1D	-0.232	0.266	-0.211	0.780	14.766	6.006	1.13	1.13	1.13	1.13	0.07	0.00	0.12
1 1I	-0.073	-2.163	-0.123	-1.283	26.447	7.079	1.13	1.13	1.13	1.13	0.20	0.00	0.22
1 1J	-0.205	-2.163	-0.207	-1.283	26.447	7.079	1.13	1.13	1.13	1.13	0.19	0.00	0.22
1 1K	-0.073	0.770	-0.123	1.325	26.447	7.079	1.13	1.13	1.13	1.13	0.12	0.00	0.22
1 1L	-0.205	0.770	-0.207	1.325	26.447	7.079	1.13	1.13	1.13	1.13	0.12	0.00	0.22
1 2	-0.201	-1.220	-0.265	0.052	6.440	8.461	1.13	1.13	1.13	1.13	0.10	0.00	0.06
1 7	-0.152	-2.045	-0.099	0.332	11.339	10.362	1.13	1.13	1.13	1.13	0.18	0.00	0.09
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
2 1A	0.881	-1.356	1.139	-2.405	5.776	1.442	1.13	1.13	1.13	1.13	0.23	0.00	0.05
2 1B	0.522	-1.356	0.174	-2.405	5.776	1.442	1.13	1.13	1.13	1.13	0.22	0.00	0.05
2 1C	0.881	0.293	1.139	1.477	5.776	1.442	1.13	1.13	1.13	1.13	0.15	0.00	0.05
2 1D	0.522	0.293	0.174	1.477	5.776	1.442	1.13	1.13	1.13	1.13	0.14	0.00	0.05
2 1I	0.878	-2.054	1.061	-3.292	5.776	1.442	1.13	1.13	1.13	1.13	0.31	0.00	0.05
2 1J	0.526	-2.054	0.253	-3.292	5.776	1.442	1.13	1.13	1.13	1.13	0.30	0.00	0.05
2 1K	0.878	0.991	1.061	2.365	5.776	1.442	1.13	1.13	1.13	1.13	0.23	0.00	0.05
2 1L	0.526	0.991	0.253	2.365	5.776	1.442	1.13	1.13	1.13	1.13	0.22	0.00	0.05
2 2	1.097	-0.894	1.142	-0.812	13.042	2.317	1.13	1.13	1.13	1.13	0.09	0.01	0.11
2 7	0.489	-2.645	-0.352	-0.809	11.549	21.031	1.13	1.13	1.13	1.13	0.24	0.00	0.17
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
3 1A	-0.019	-0.099	0.054	0.979	2.434	3.117	1.13	1.13	1.13	1.13	0.09	0.00	0.03
3 1B	-0.025	-0.099	0.012	0.979	2.434	3.117	1.13	1.13	1.13	1.13	0.09	0.00	0.03
3 1C	-0.019	-0.195	0.054	1.318	1.977	3.790	1.13	1.13	1.13	1.13	0.12	0.00	0.03
3 1D	-0.025	-0.195	0.012	1.318	1.977	3.790	1.13	1.13	1.13	1.13	0.12	0.00	0.03
3 1I	-0.019	-0.102	0.053	1.024	2.475	3.097	1.13	1.13	1.13	1.13	0.09	0.00	0.03
3 1J	-0.026	-0.102	0.012	1.024	2.475	3.097	1.13	1.13	1.13	1.13	0.09	0.00	0.03
3 1K	-0.019	-0.193	0.053	1.273	1.991	3.733	1.13	1.13	1.13	1.13	0.12	0.00	0.03
3 1L	-0.026	-0.193	0.012	1.273	1.991	3.733	1.13	1.13	1.13	1.13	0.12	0.00	0.03
3 2	-0.042	-0.277	-0.037	2.078	4.119	6.550	1.13	1.13	1.13	1.13	0.18	0.00	0.05
3 7	-0.025	0.341	0.023	1.967	3.305	5.243	1.13	1.13	1.13	1.13	0.17	0.00	0.04
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
4 1A	0.032	-0.711	0.113	-1.023	11.866	8.195	1.13	1.13	1.13	1.13	0.09	0.00	0.10
4 1B	0.013	-0.711	0.015	-1.023	11.866	8.195	1.13	1.13	1.13	1.13	0.09	0.00	0.10
4 1C	0.032	-0.464	0.113	-0.453	7.138	6.704	1.13	1.13	1.13	1.13	0.04	0.00	0.06
4 1D	0.013	-0.464	0.015	-0.453	7.138	6.704	1.13	1.13	1.13	1.13	0.04	0.00	0.06
4 1I	0.029	-0.764	0.103	-1.151	12.789	8.119	1.13	1.13	1.13	1.13	0.11	0.00	0.11
4 1J	0.015	-0.764	0.024	-1.151	12.789	8.119	1.13	1.13	1.13	1.13	0.10	0.00	0.11
4 1K	0.029	-0.412	0.103	-0.325	6.297	6.346	1.13	1.13	1.13	1.13	0.04	0.00	0.05
4 1L	0.015	-0.412	0.024	-0.325	6.297	6.346	1.13	1.13	1.13	1.13	0.04	0.00	0.05
4 2	0.032	-1.028	0.084	-1.246	17.429	14.190	1.13	1.13	1.13	1.13	0.11	0.00	0.15
4 7	0.005	-0.653	0.047	-0.827	10.844	11.747	1.13	1.13	1.13	1.13	0.07	0.00	0.10
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
5 1A	0.026	-0.639	-0.016	0.885	6.789	4.354	1.13	1.13	1.13	1.13	0.08	0.00	0.06
5 1B	0.009	-0.639	-0.068	0.885	6.789	4.354	1.13	1.13	1.13	1.13	0.08	0.00	0.06
5 1C	0.026	-0.441	-0.016	1.109	6.218	4.472	1.13	1.13	1.13	1.13	0.10	0.00	0.05
5 1D	0.009	-0.441	-0.068	1.109	6.218	4.472	1.13	1.13	1.13	1.13	0.10	0.00	0.05
5 1I	0.028	-0.650	-0.017	0.908	6.570	4.188	1.13	1.13	1.13	1.13	0.08	0.00	0.05
5 1J	0.007	-0.650	-0.067	0.908	6.570	4.188	1.13	1.13	1.13	1.13	0.08	0.00	0.05
5 1K	0.028	-0.429	-0.017	1.085	6.472	4.588	1.13	1.13	1.13	1.13	0.10	0.00	0.05
5 1L	0.007	-0.429	-0.067	1.085	6.472	4.588	1.13	1.13	1.13	1.13	0.10	0.00	0.05
5 2	-0.032	-1.056	-0.099	1.800	10.341	6.630	1.13	1.13	1.13	1.13	0.16	0.00	0.09
5 7	-0.021	-0.921	-0.083	1.681	8.291	7.589	1.13	1.13	1.13	1.13	0.15	0.00	0.07
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
6 1A	-0.023	-0.096	-0.006	-0.516	0.570	4.728	1.13	1.13	1.13	1.13	0.05	0.00	0.04
6 1B	-0.028	-0.096	-0.060	-0.516	0.570	4.728	1.13	1.13	1.13	1.13	0.05	0.00	0.04
6 1C	-0.023	-0.033	-0.006	-0.324	2.066	3.779	1.13	1.13	1.13	1.13	0.03	0.00	0.03
6 1D	-0.028	-0.033	-0.060	-0.324	2.066	3.779	1.13	1.13	1.13	1.13	0.03	0.00	0.03
6 1I	-0.021	-0.095	0.001	-0.538	0.045	5.414	1.13	1.13	1.13	1.13	0.05	0.00	0.05
6 1J	-0.029	-0.095	-0.067	-0.538	0.045	5.414	1.13	1.13	1.13	1.13	0.05	0.00	0.04
6 1K	-0.021	-0.034	0.001	-0.302	2.770	3.705	1.13	1.13	1.13	1.13	0.03	0.00	0.03
6 1L	-0.029	-0.034	-0.067	-0.302	2.770	3.705	1.13	1.13	1.13	1.13	0.03	0.00	0.03
6 2	-0.046	-0.120	-0.068	-0.879	3.864	9.295	1.13	1.13	1.13	1.13	0.08	0.00	0.08
6 7	-0.035	-0.048	-0.065	-0.667	4.447	7.668	1.13	1.13	1.13	1.13	0.06	0.00	0.06
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
7 1A	0.038	0.059	0.037	1.128	2.691	10.909	1.13	1.13	1.13	1.13	0.10	0.00	0.09
7 1B	0.013	0.059	-0.016	1.128	2.691	10.909	1.13	1.13	1.13	1.13	0.10	0.00	0.09
7 1C	0.038	0.213	0.037	1.336	2.514	12.086	1.13	1.13	1.13	1.13	0.12	0.00	0.10





# Relazione di calcolo delle opere strutturali

## Riquilificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

23	1J	0.012	-0.343	0.046	0.903	9.913	2.574	1.13	1.13	1.13	1.13	0.08	0.00	0.08
23	1K	0.025	-0.256	0.116	1.287	9.984	3.035	1.13	1.13	1.13	1.13	0.12	0.00	0.08
23	1L	0.012	-0.256	0.046	1.287	9.984	3.035	1.13	1.13	1.13	1.13	0.12	0.00	0.08
23	2	0.028	-0.545	0.119	1.966	18.902	1.782	1.13	1.13	1.13	1.13	0.17	0.00	0.16
23	7	0.012	-0.469	0.076	1.632	17.196	1.545	1.13	1.13	1.13	1.13	0.14	0.00	0.14
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
24	1A	0.033	-0.089	0.084	0.947	1.136	3.395	1.13	1.13	1.13	1.13	0.09	0.00	0.03
24	1B	0.018	-0.089	0.022	0.947	1.136	3.395	1.13	1.13	1.13	1.13	0.09	0.00	0.03
24	1C	0.033	0.005	0.084	1.298	0.711	1.587	1.13	1.13	1.13	1.13	0.12	0.00	0.01
24	1D	0.018	0.005	0.022	1.298	0.711	1.587	1.13	1.13	1.13	1.13	0.12	0.00	0.01
24	1I	0.032	-0.094	0.083	0.981	1.035	3.268	1.13	1.13	1.13	1.13	0.09	0.00	0.03
24	1J	0.019	-0.094	0.023	0.981	1.035	3.268	1.13	1.13	1.13	1.13	0.09	0.00	0.03
24	1K	0.032	0.009	0.083	1.264	0.626	1.664	1.13	1.13	1.13	1.13	0.12	0.00	0.01
24	1L	0.019	0.009	0.023	1.264	0.626	1.664	1.13	1.13	1.13	1.13	0.12	0.00	0.01
24	2	0.038	-0.081	0.068	2.030	1.710	4.682	1.13	1.13	1.13	1.13	0.18	0.00	0.04
24	7	0.012	-0.151	0.038	1.752	1.437	4.481	1.13	1.13	1.13	1.13	0.15	0.00	0.04
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
25	1A	0.144	-1.283	0.025	-0.691	4.547	14.200	1.13	1.13	1.13	1.13	0.12	0.00	0.12
25	1B	0.037	-1.283	-0.058	-0.691	4.547	14.200	1.13	1.13	1.13	1.13	0.12	0.00	0.12
25	1C	0.144	-0.580	0.025	-0.109	4.379	3.572	1.13	1.13	1.13	1.13	0.05	0.00	0.04
25	1D	0.037	-0.580	-0.058	-0.109	4.379	3.572	1.13	1.13	1.13	1.13	0.05	0.00	0.04
25	1I	0.133	-1.340	0.012	-0.843	6.616	14.181	1.13	1.13	1.13	1.13	0.12	0.00	0.12
25	1J	0.048	-1.340	-0.044	-0.843	6.616	14.181	1.13	1.13	1.13	1.13	0.12	0.00	0.12
25	1K	0.133	-0.523	0.012	0.042	2.663	1.284	1.13	1.13	1.13	1.13	0.05	0.00	0.02
25	1L	0.048	-0.523	-0.044	0.042	2.663	1.284	1.13	1.13	1.13	1.13	0.05	0.00	0.02
25	2	0.134	-1.633	-0.032	-0.667	8.020	22.893	1.13	1.13	1.13	1.13	0.14	0.00	0.19
25	7	0.064	-1.326	0.027	-0.409	7.858	16.308	1.13	1.13	1.13	1.13	0.12	0.00	0.14
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
26	1A	0.407	-2.419	0.182	-2.902	22.228	25.650	1.13	1.13	1.13	1.13	0.27	0.00	0.21
26	1B	0.218	-2.419	0.059	-2.902	22.228	25.650	1.13	1.13	1.13	1.13	0.26	0.00	0.21
26	1C	0.407	-0.258	0.182	0.071	22.228	25.650	1.13	1.13	1.13	1.13	0.03	0.00	0.21
26	1D	0.218	-0.258	0.059	0.071	22.228	25.650	1.13	1.13	1.13	1.13	0.03	0.00	0.21
26	1I	0.391	-2.091	0.166	-3.471	22.228	25.650	1.13	1.13	1.13	1.13	0.32	0.00	0.21
26	1J	0.235	-2.091	0.075	-3.471	22.228	25.650	1.13	1.13	1.13	1.13	0.32	0.00	0.21
26	1K	0.391	-0.586	0.166	0.639	22.228	25.650	1.13	1.13	1.13	1.13	0.06	0.00	0.21
26	1L	0.235	-0.586	0.075	0.639	22.228	25.650	1.13	1.13	1.13	1.13	0.06	0.00	0.21
26	2	0.487	-2.535	0.209	-2.416	40.663	48.754	1.13	1.13	1.13	1.13	0.23	0.00	0.41
26	7	0.247	-2.563	0.045	-0.936	26.709	38.465	1.13	1.13	1.13	1.13	0.23	0.00	0.32
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
27	1A	0.035	-0.391	0.149	0.380	0.389	15.519	1.13	1.13	1.13	1.13	0.04	0.00	0.13
27	1B	0.021	-0.391	0.070	0.380	0.389	15.519	1.13	1.13	1.13	1.13	0.04	0.00	0.13
27	1C	0.035	-0.234	0.149	1.061	0.077	10.573	1.13	1.13	1.13	1.13	0.10	0.00	0.09
27	1D	0.021	-0.234	0.070	1.061	0.077	10.573	1.13	1.13	1.13	1.13	0.10	0.00	0.09
27	1I	0.034	-0.399	0.141	0.454	0.729	15.784	1.13	1.13	1.13	1.13	0.04	0.00	0.13
27	1J	0.021	-0.399	0.077	0.454	0.729	15.784	1.13	1.13	1.13	1.13	0.04	0.00	0.13
27	1K	0.034	-0.226	0.141	0.987	0.313	10.457	1.13	1.13	1.13	1.13	0.09	0.00	0.09
27	1L	0.021	-0.226	0.077	0.987	0.313	10.457	1.13	1.13	1.13	1.13	0.09	0.00	0.09
27	2	0.045	-0.554	0.171	1.255	1.767	21.709	1.13	1.13	1.13	1.13	0.11	0.00	0.18
27	7	0.026	-0.440	0.134	1.126	5.191	15.300	1.13	1.13	1.13	1.13	0.10	0.00	0.13
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
28	1A	-0.015	-0.537	-0.010	0.896	5.177	1.704	1.13	1.13	1.13	1.13	0.08	0.00	0.04
28	1B	-0.026	-0.537	-0.058	0.896	5.177	1.704	1.13	1.13	1.13	1.13	0.08	0.00	0.04
28	1C	-0.015	-0.412	-0.010	1.233	4.662	2.255	1.13	1.13	1.13	1.13	0.11	0.00	0.04
28	1D	-0.026	-0.412	-0.058	1.233	4.662	2.255	1.13	1.13	1.13	1.13	0.11	0.00	0.04
28	1I	-0.014	-0.560	-0.009	0.912	4.985	1.303	1.13	1.13	1.13	1.13	0.08	0.00	0.04
28	1J	-0.028	-0.560	-0.059	0.912	4.985	1.303	1.13	1.13	1.13	1.13	0.08	0.00	0.04
28	1K	-0.014	-0.390	-0.009	1.217	4.886	1.974	1.13	1.13	1.13	1.13	0.11	0.00	0.04
28	1L	-0.028	-0.390	-0.059	1.217	4.886	1.974	1.13	1.13	1.13	1.13	0.11	0.00	0.04
28	2	-0.039	-0.912	-0.085	1.927	8.057	1.842	1.13	1.13	1.13	1.13	0.17	0.00	0.07
28	7	-0.026	-0.787	-0.070	1.798	7.212	0.695	1.13	1.13	1.13	1.13	0.16	0.00	0.06
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
29	1A	-0.016	-0.433	-0.008	0.826	5.310	3.863	1.13	1.13	1.13	1.13	0.08	0.00	0.04
29	1B	-0.028	-0.433	-0.061	0.826	5.310	3.863	1.13	1.13	1.13	1.13	0.07	0.00	0.04
29	1C	-0.016	-0.310	-0.008	1.134	6.474	4.788	1.13	1.13	1.13	1.13	0.10	0.00	0.05
29	1D	-0.028	-0.310	-0.061	1.134	6.474	4.788	1.13	1.13	1.13	1.13	0.10	0.00	0.05
29	1I	-0.015	-0.446	-0.008	0.851	5.437	3.803	1.13	1.13	1.13	1.13	0.08	0.00	0.05
29	1J	-0.029	-0.446	-0.061	0.851	5.437	3.803	1.13	1.13	1.13	1.13	0.08	0.00	0.05
29	1K	-0.015	-0.297	-0.008	1.110	6.855	4.820	1.13	1.13	1.13	1.13	0.10	0.00	0.06
29	1L	-0.029	-0.297	-0.061	1.110	6.855	4.820	1.13	1.13	1.13	1.13	0.10	0.00	0.06
29	2	-0.042	-0.706	-0.085	1.761	12.846	10.600	1.13	1.13	1.13	1.13	0.15	0.00	0.11
29	7	-0.028	-0.622	-0.068	1.680	12.115	10.124	1.13	1.13	1.13	1.13	0.15	0.00	0.10
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
30	1A	0.019	-0.989	-0.035	-0.721	10.072	9.266	1.13	1.13	1.13	1.13	0.09	0.00	0.08
30	1B	-0.001	-0.989	-0.091	-0.721	10.072	9.266	1.13	1.13	1.13	1.13	0.09	0.00	0.08
30	1C	0.019	-0.639	-0.035	-0.467	8.708	7.255	1.13	1.13	1.13	1.13	0.06	0.00	0.07
30	1D	-0.001	-0.639	-0.091	-0.467	8.708	7.255	1.13	1.13	1.13	1.13	0.06	0.00	0.07
30	1I	0.018	-0.997	-0.032	-0.802	9.344	9.632	1.13	1.13	1.13	1.13	0.09	0.00	0.08
30	1J	0.000	-0.997	-0.093	-0.802	9.344	9.632	1.13	1.13	1.13	1.13	0.09	0.00	0.08
30	1K	0.018	-0.631	-0.032	-0.386	7.456	7.052	1.13	1.13	1.13	1.13	0.06	0.00	0.06
30	1L	0.000	-0.631	-0.093	-0.386	7.456	7.052	1.13	1.13	1.13	1.13	0.06	0.00	0.06
30	2	0.012	-1.646	-0.134	-1.314	21.574	17.408	1.13	1.13	1.13	1.13	0.14	0.00	0.18
30	7	-0.025	-1.397	-0.121	-0.932	17.149	14.701	1.13	1.13	1.13	1.13	0.12	0.00	0.14
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
31	1A	0.007	-0.335	-0.022	-0.684	9.836	5.584	1.13	1.13	1.13	1.13	0.06	0.00	0.08
31	1B	-0.035	-0.335	-0.069	-0.684	9.836	5.584	1.13	1.13	1.13	1.13	0.06	0.00	0.08
31	1C	0.007	-0.094	-0.022	-0.458	7.758	2.979	1.13	1.13	1.13	1.13	0.04	0.00	0.06
31	1D	-0.035	-0.094	-0.069	-0.458	7.758	2.979	1.13	1.13	1.13	1.13	0.04	0.00	0.06
31	1I	0.007	-0.348	-0.017	-0.674	9.634	5.769	1.13	1.13	1.13	1.13	0.06	0.00	0.08
31	1J	-0.035	-0.348	-0.075	-0.674	9.634	5.769	1.13	1.13	1.13	1.13	0.06	0.00	0.08

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

31 1K	0.007	-0.081	-0.017	-0.467	7.442	2.975	1.13	1.13	1.13	1.13	0.04	0.00	0.06
31 1L	-0.035	-0.081	-0.075	-0.467	7.442	2.975	1.13	1.13	1.13	1.13	0.04	0.00	0.06
31 2	-0.025	-0.428	-0.098	-1.308	18.873	6.831	1.13	1.13	1.13	1.13	0.11	0.00	0.16
31 7	-0.017	-0.357	-0.095	-0.999	14.763	6.652	1.13	1.13	1.13	1.13	0.09	0.00	0.12
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayysup = --	(e arm. base nelle due direz.)							
32 1A	0.073	-0.649	-0.054	-0.043	0.784	0.770	1.13	1.13	1.13	1.13	0.06	0.00	0.01
32 1B	-0.012	-0.649	-0.108	-0.043	0.784	0.770	1.13	1.13	1.13	1.13	0.06	0.00	0.01
32 1C	0.073	-0.377	-0.054	-0.029	0.784	0.770	1.13	1.13	1.13	1.13	0.04	0.00	0.01
32 1D	-0.012	-0.377	-0.108	-0.029	0.784	0.770	1.13	1.13	1.13	1.13	0.03	0.00	0.01
32 1I	0.075	-0.646	-0.039	-0.041	0.784	0.770	1.13	1.13	1.13	1.13	0.06	0.00	0.01
32 1J	-0.014	-0.646	-0.124	-0.041	0.784	0.770	1.13	1.13	1.13	1.13	0.06	0.00	0.01
32 1K	0.075	-0.380	-0.039	-0.031	0.784	0.770	1.13	1.13	1.13	1.13	0.04	0.00	0.01
32 1L	-0.014	-0.380	-0.124	-0.031	0.784	0.770	1.13	1.13	1.13	1.13	0.03	0.00	0.01
32 2	0.071	-1.120	-0.123	-0.077	2.479	1.845	1.13	1.13	1.13	1.13	0.10	0.00	0.02
32 7	0.104	-0.950	-0.055	0.063	1.216	1.303	1.13	1.13	1.13	1.13	0.08	0.00	0.01
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayysup = --	(e arm. base nelle due direz.)							
33 1A	0.091	-0.982	0.094	-0.223	2.907	18.008	1.13	1.13	1.13	1.13	0.09	0.00	0.15
33 1B	0.020	-0.982	0.012	-0.223	2.907	18.008	1.13	1.13	1.13	1.13	0.09	0.00	0.15
33 1C	0.091	-0.425	0.094	-0.064	4.090	9.639	1.13	1.13	1.13	1.13	0.04	0.00	0.08
33 1D	0.020	-0.425	0.012	-0.064	4.090	9.639	1.13	1.13	1.13	1.13	0.04	0.00	0.08
33 1I	0.083	-1.106	0.084	-0.254	2.567	19.700	1.13	1.13	1.13	1.13	0.10	0.00	0.16
33 1J	0.028	-1.106	0.023	-0.254	2.567	19.700	1.13	1.13	1.13	1.13	0.10	0.00	0.16
33 1K	0.083	-0.301	0.084	-0.033	5.414	8.061	1.13	1.13	1.13	1.13	0.03	0.00	0.07
33 1L	0.028	-0.301	0.023	-0.033	5.414	8.061	1.13	1.13	1.13	1.13	0.03	0.00	0.07
33 2	0.086	-1.226	0.067	-0.238	6.397	24.988	1.13	1.13	1.13	1.13	0.11	0.00	0.21
33 7	0.027	-0.629	0.046	-0.279	6.858	12.964	1.13	1.13	1.13	1.13	0.06	0.00	0.11
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayysup = --	(e arm. base nelle due direz.)							
34 1A	0.036	-0.777	-0.011	-0.170	4.020	11.626	1.13	1.13	1.13	1.13	0.07	0.00	0.10
34 1B	0.010	-0.777	-0.046	-0.170	4.020	11.626	1.13	1.13	1.13	1.13	0.07	0.00	0.10
34 1C	0.036	-0.410	-0.011	-0.051	4.510	6.412	1.13	1.13	1.13	1.13	0.04	0.00	0.05
34 1D	0.010	-0.410	-0.046	-0.051	4.510	6.412	1.13	1.13	1.13	1.13	0.04	0.00	0.05
34 1I	0.041	-0.773	-0.009	-0.166	3.775	12.026	1.13	1.13	1.13	1.13	0.07	0.00	0.10
34 1J	0.005	-0.773	-0.049	-0.166	3.775	12.026	1.13	1.13	1.13	1.13	0.07	0.00	0.10
34 1K	0.041	-0.414	-0.009	-0.055	4.848	6.044	1.13	1.13	1.13	1.13	0.04	0.00	0.05
34 1L	0.005	-0.414	-0.049	-0.055	4.848	6.044	1.13	1.13	1.13	1.13	0.04	0.00	0.05
34 2	0.033	-1.177	-0.052	-0.219	8.426	17.845	1.13	1.13	1.13	1.13	0.10	0.00	0.15
34 7	0.009	-1.077	-0.045	-0.174	8.483	16.259	1.13	1.13	1.13	1.13	0.09	0.00	0.13
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayysup = --	(e arm. base nelle due direz.)							
35 1A	-0.023	-0.581	0.038	-0.367	1.821	1.620	1.13	1.13	1.13	1.13	0.05	0.00	0.02
35 1B	-0.071	-0.581	0.047	-0.367	1.821	1.620	1.13	1.13	1.13	1.13	0.05	0.00	0.02
35 1C	-0.023	-0.387	0.038	-0.264	1.446	0.128	1.13	1.13	1.13	1.13	0.03	0.00	0.01
35 1D	-0.071	-0.387	0.047	-0.264	1.446	0.128	1.13	1.13	1.13	1.13	0.03	0.00	0.01
35 1I	-0.017	-0.588	0.035	-0.399	1.796	2.261	1.13	1.13	1.13	1.13	0.05	0.00	0.02
35 1J	-0.077	-0.588	0.050	-0.399	1.796	2.261	1.13	1.13	1.13	1.13	0.05	0.00	0.02
35 1K	-0.017	-0.380	0.035	-0.232	1.658	0.482	1.13	1.13	1.13	1.13	0.03	0.00	0.01
35 1L	-0.077	-0.380	0.050	-0.232	1.658	0.482	1.13	1.13	1.13	1.13	0.03	0.00	0.01
35 2	-0.091	-0.982	0.075	-0.596	3.520	0.288	1.13	1.13	1.13	1.13	0.08	0.00	0.03
35 7	-0.079	-0.795	0.049	-0.506	3.090	1.904	1.13	1.13	1.13	1.13	0.07	0.00	0.03
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayysup = --	(e arm. base nelle due direz.)							
36 1A	0.068	1.097	0.031	-0.229	3.578	18.383	1.13	1.13	1.13	1.13	0.10	0.00	0.15
36 1B	0.005	1.097	0.012	-0.229	3.578	18.383	1.13	1.13	1.13	1.13	0.10	0.00	0.15
36 1C	0.068	1.390	0.031	-0.096	2.334	18.792	1.13	1.13	1.13	1.13	0.13	0.00	0.16
36 1D	0.005	1.390	0.012	-0.096	2.334	18.792	1.13	1.13	1.13	1.13	0.13	0.00	0.16
36 1I	0.068	1.130	0.031	-0.232	3.797	18.893	1.13	1.13	1.13	1.13	0.10	0.00	0.16
36 1J	0.005	1.130	0.013	-0.232	3.797	18.893	1.13	1.13	1.13	1.13	0.10	0.00	0.16
36 1K	0.068	1.358	0.031	-0.093	2.034	18.024	1.13	1.13	1.13	1.13	0.12	0.00	0.15
36 1L	0.005	1.358	0.013	-0.093	2.034	18.024	1.13	1.13	1.13	1.13	0.12	0.00	0.15
36 2	0.038	2.263	0.032	-0.308	7.267	33.392	1.13	1.13	1.13	1.13	0.20	0.00	0.28
36 7	0.014	1.972	0.012	-0.327	3.384	28.797	1.13	1.13	1.13	1.13	0.17	0.00	0.24
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayysup = --	(e arm. base nelle due direz.)							
37 1A	-0.041	0.295	0.028	-0.992	4.228	1.222	1.13	1.13	1.13	1.13	0.09	0.00	0.04
37 1B	-0.089	0.295	-0.001	-0.992	4.228	1.222	1.13	1.13	1.13	1.13	0.09	0.00	0.03
37 1C	-0.041	0.483	0.028	-0.646	2.968	1.788	1.13	1.13	1.13	1.13	0.06	0.00	0.02
37 1D	-0.089	0.483	-0.001	-0.646	2.968	1.788	1.13	1.13	1.13	1.13	0.06	0.00	0.02
37 1I	-0.038	0.268	0.029	-1.018	4.789	1.278	1.13	1.13	1.13	1.13	0.09	0.00	0.04
37 1J	-0.092	0.268	-0.002	-1.018	4.789	1.278	1.13	1.13	1.13	1.13	0.09	0.00	0.04
37 1K	-0.038	0.510	0.029	-0.620	2.548	1.861	1.13	1.13	1.13	1.13	0.06	0.00	0.02
37 1L	-0.092	0.510	-0.002	-0.620	2.548	1.861	1.13	1.13	1.13	1.13	0.06	0.00	0.02
37 2	-0.138	0.594	-0.022	-1.642	7.144	2.266	1.13	1.13	1.13	1.13	0.14	0.00	0.06
37 7	-0.119	0.595	-0.016	-1.331	4.668	2.166	1.13	1.13	1.13	1.13	0.12	0.00	0.04
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayysup = --	(e arm. base nelle due direz.)							
38 1A	0.107	-0.323	0.073	-0.431	3.027	4.910	1.13	1.13	1.13	1.13	0.04	0.00	0.04
38 1B	0.086	-0.323	-0.024	-0.431	3.027	4.910	1.13	1.13	1.13	1.13	0.04	0.00	0.04
38 1C	0.107	-0.215	0.073	0.105	3.243	2.937	1.13	1.13	1.13	1.13	0.02	0.00	0.03
38 1D	0.086	-0.215	-0.024	0.105	3.243	2.937	1.13	1.13	1.13	1.13	0.02	0.00	0.03
38 1I	0.107	-0.308	0.066	-0.382	2.957	4.769	1.13	1.13	1.13	1.13	0.04	0.00	0.04
38 1J	0.087	-0.308	-0.018	-0.382	2.957	4.769	1.13	1.13	1.13	1.13	0.03	0.00	0.04
38 1K	0.107	-0.230	0.066	0.057	3.432	2.997	1.13	1.13	1.13	1.13	0.02	0.00	0.03
38 1L	0.087	-0.230	-0.018	0.057	3.432	2.997	1.13	1.13	1.13	1.13	0.02	0.00	0.03
38 2	0.144	-0.547	0.036	-0.275	5.032	6.998	1.13	1.13	1.13	1.13	0.05	0.00	0.06
38 7	0.093	-0.613	0.010	-0.235	2.526	5.888	1.13	1.13	1.13	1.13	0.05	0.00	0.05
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayysup = --	(e arm. base nelle due direz.)							
39 1A	0.025	-0.301	0.141	-0.048	3.787	6.407	1.13	1.13	1.13	1.13	0.03	0.00	0.05
39 1B	0.010	-0.301	0.059	-0.048	3.787	6.407	1.13	1.13	1.13	1.13	0.03	0.00	0.05
39 1C	0.025	-0.252	0.141	0.534	4.016	5.228	1.13	1.13	1.13	1.13	0.05	0.00	0.04
39 1D	0.010	-0.252	0.059	0.534	4.016	5.228	1.13	1.13	1.13	1.13	0.05	0.00	0.04
39 1I	0.024	-0.295	0.136	0.009	3.684	6.356	1.13	1.13	1.13	1.13	0.03	0.00	0.05
39 1J	0.010	-0.295	0.064	0.009	3.684	6.356	1.13	1.13	1.13	1.13	0.03	0.00	0.05
39 1K	0.024	-0.259	0.136	0.477	3.812	5.336	1.13	1.13	1.13	1.13	0.04	0.00	0.04









## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Spess. =	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --	(e arm. base nelle due direz.)								
65	1A	0.038	-0.865	-0.050	-0.027	10.982	10.414	1.13	1.13	1.13	1.13	0.08	0.00	0.09
65	1B	0.027	-0.865	-0.098	-0.027	10.982	10.414	1.13	1.13	1.13	1.13	0.08	0.00	0.09
65	1C	0.038	-0.614	-0.050	0.267	9.465	8.366	1.13	1.13	1.13	1.13	0.06	0.00	0.08
65	1D	0.027	-0.614	-0.098	0.267	9.465	8.366	1.13	1.13	1.13	1.13	0.06	0.00	0.08
65	1I	0.039	-0.822	-0.049	-0.051	10.704	10.585	1.13	1.13	1.13	1.13	0.08	0.00	0.09
65	1J	0.026	-0.822	-0.100	-0.051	10.704	10.585	1.13	1.13	1.13	1.13	0.07	0.00	0.09
65	1K	0.039	-0.657	-0.049	0.291	9.803	8.025	1.13	1.13	1.13	1.13	0.06	0.00	0.08
65	1L	0.026	-0.657	-0.100	0.291	9.803	8.025	1.13	1.13	1.13	1.13	0.06	0.00	0.08
65	2	0.050	-1.514	-0.148	-0.190	20.372	14.862	1.13	1.13	1.13	1.13	0.13	0.00	0.17
65	7	0.023	-1.348	-0.119	0.336	20.046	13.006	1.13	1.13	1.13	1.13	0.12	0.00	0.17
66	1A	0.039	-0.778	-0.042	0.466	0.845	1.994	1.13	1.13	1.13	1.13	0.07	0.00	0.02
66	1B	0.015	-0.778	-0.088	0.466	0.845	1.994	1.13	1.13	1.13	1.13	0.07	0.00	0.02
66	1C	0.039	-0.518	-0.042	0.721	0.204	2.601	1.13	1.13	1.13	1.13	0.06	0.00	0.02
66	1D	0.015	-0.518	-0.088	0.721	0.204	2.601	1.13	1.13	1.13	1.13	0.06	0.00	0.02
66	1I	0.040	-0.766	-0.041	0.454	0.558	2.603	1.13	1.13	1.13	1.13	0.07	0.00	0.02
66	1J	0.014	-0.766	-0.089	0.454	0.558	2.603	1.13	1.13	1.13	1.13	0.07	0.00	0.02
66	1K	0.040	-0.530	-0.041	0.733	0.307	2.333	1.13	1.13	1.13	1.13	0.07	0.00	0.02
66	1L	0.014	-0.530	-0.089	0.733	0.307	2.333	1.13	1.13	1.13	1.13	0.07	0.00	0.02
66	2	0.042	-1.303	-0.136	1.039	1.414	5.250	1.13	1.13	1.13	1.13	0.11	0.00	0.04
66	7	0.020	-1.147	-0.110	1.087	2.273	3.309	1.13	1.13	1.13	1.13	0.10	0.00	0.03
67	1A	0.046	-0.873	-0.043	-0.573	1.737	9.708	1.13	1.13	1.13	1.13	0.08	0.00	0.08
67	1B	0.026	-0.873	-0.093	-0.573	1.737	9.708	1.13	1.13	1.13	1.13	0.08	0.00	0.08
67	1C	0.046	-0.551	-0.043	-0.341	1.716	8.174	1.13	1.13	1.13	1.13	0.05	0.00	0.07
67	1D	0.026	-0.551	-0.093	-0.341	1.716	8.174	1.13	1.13	1.13	1.13	0.05	0.00	0.07
67	1I	0.048	-0.827	-0.040	-0.622	1.853	9.977	1.13	1.13	1.13	1.13	0.08	0.00	0.08
67	1J	0.025	-0.827	-0.096	-0.622	1.853	9.977	1.13	1.13	1.13	1.13	0.08	0.00	0.08
67	1K	0.048	-0.596	-0.040	-0.293	1.216	7.452	1.13	1.13	1.13	1.13	0.05	0.00	0.06
67	1L	0.025	-0.596	-0.096	-0.293	1.216	7.452	1.13	1.13	1.13	1.13	0.05	0.00	0.06
67	2	0.061	-1.480	-0.136	-1.028	4.019	22.422	1.13	1.13	1.13	1.13	0.13	0.00	0.19
67	7	0.037	-1.328	-0.115	-0.675	2.477	18.889	1.13	1.13	1.13	1.13	0.12	0.00	0.16
68	1A	0.047	-0.291	0.131	-0.137	7.196	1.790	1.13	1.13	1.13	1.13	0.03	0.00	0.06
68	1B	0.011	-0.291	0.030	-0.137	7.196	1.790	1.13	1.13	1.13	1.13	0.03	0.00	0.06
68	1C	0.047	-0.105	0.131	-0.042	3.859	0.441	1.13	1.13	1.13	1.13	0.01	0.00	0.03
68	1D	0.011	-0.105	0.030	-0.042	3.859	0.441	1.13	1.13	1.13	1.13	0.01	0.00	0.03
68	1I	0.046	-0.324	0.119	-0.150	8.051	1.881	1.13	1.13	1.13	1.13	0.03	0.00	0.07
68	1J	0.012	-0.324	0.043	-0.150	8.051	1.881	1.13	1.13	1.13	1.13	0.03	0.00	0.07
68	1K	0.046	-0.072	0.119	-0.029	3.027	0.120	1.13	1.13	1.13	1.13	0.01	0.00	0.03
68	1L	0.012	-0.072	0.043	-0.029	3.027	0.120	1.13	1.13	1.13	1.13	0.01	0.00	0.03
68	2	0.046	-0.352	0.115	-0.166	9.014	1.229	1.13	1.13	1.13	1.13	0.03	0.00	0.08
68	7	0.013	-0.136	0.055	-0.105	4.191	3.072	1.13	1.13	1.13	1.13	0.01	0.00	0.04
69	1A	-0.007	-0.644	0.001	-1.055	3.493	1.904	1.13	1.13	1.13	1.13	0.10	0.00	0.03
69	1B	-0.017	-0.644	-0.050	-1.055	3.493	1.904	1.13	1.13	1.13	1.13	0.10	0.00	0.03
69	1C	-0.007	-0.355	0.001	-0.455	1.625	1.414	1.13	1.13	1.13	1.13	0.04	0.00	0.01
69	1D	-0.017	-0.355	-0.050	-0.455	1.625	1.414	1.13	1.13	1.13	1.13	0.04	0.00	0.01
69	1I	-0.005	-0.662	0.006	-1.053	3.618	1.972	1.13	1.13	1.13	1.13	0.10	0.00	0.03
69	1J	-0.019	-0.662	-0.055	-1.053	3.618	1.972	1.13	1.13	1.13	1.13	0.09	0.00	0.03
69	1K	-0.005	-0.337	0.006	-0.457	1.405	1.692	1.13	1.13	1.13	1.13	0.04	0.00	0.01
69	1L	-0.019	-0.337	-0.055	-0.457	1.405	1.692	1.13	1.13	1.13	1.13	0.04	0.00	0.01
69	2	-0.021	-0.994	-0.051	-1.562	3.687	4.699	1.13	1.13	1.13	1.13	0.14	0.00	0.04
69	7	-0.013	-0.891	-0.057	-1.410	4.581	3.035	1.13	1.13	1.13	1.13	0.12	0.00	0.04
70	1A	0.010	-1.887	0.184	-1.701	4.971	23.732	1.13	1.13	1.13	1.13	0.17	0.00	0.20
70	1B	0.032	-1.887	0.061	-1.701	4.971	23.732	1.13	1.13	1.13	1.13	0.17	0.00	0.20
70	1C	0.010	-0.782	0.184	-0.331	4.971	23.732	1.13	1.13	1.13	1.13	0.07	0.00	0.20
70	1D	0.032	-0.782	0.061	-0.331	4.971	23.732	1.13	1.13	1.13	1.13	0.07	0.00	0.20
70	1I	0.002	-2.087	0.205	-2.071	4.822	24.565	1.13	1.13	1.13	1.13	0.19	0.00	0.21
70	1J	0.040	-2.087	0.040	-2.071	4.822	24.565	1.13	1.13	1.13	1.13	0.19	0.00	0.21
70	1K	0.002	-0.582	0.205	0.701	4.822	24.565	1.13	1.13	1.13	1.13	0.07	0.00	0.21
70	1L	0.040	-0.582	0.040	0.701	4.822	24.565	1.13	1.13	1.13	1.13	0.06	0.00	0.21
70	2	-0.053	-2.846	0.200	-1.342	8.777	53.477	1.13	1.13	1.13	1.13	0.25	0.00	0.45
70	7	-0.081	-2.277	0.099	-1.229	9.071	43.419	1.13	1.13	1.13	1.13	0.20	0.00	0.36
71	1A	0.017	-0.149	-0.004	-0.376	2.411	3.900	1.13	1.13	1.13	1.13	0.03	0.00	0.03
71	1B	0.008	-0.149	-0.046	-0.376	2.411	3.900	1.13	1.13	1.13	1.13	0.03	0.00	0.03
71	1C	0.017	-0.059	-0.004	-0.151	0.586	2.827	1.13	1.13	1.13	1.13	0.01	0.00	0.02
71	1D	0.008	-0.059	-0.046	-0.151	0.586	2.827	1.13	1.13	1.13	1.13	0.01	0.00	0.02
71	1I	0.018	-0.154	0.001	-0.374	2.457	3.916	1.13	1.13	1.13	1.13	0.03	0.00	0.03
71	1J	0.006	-0.154	-0.050	-0.374	2.457	3.916	1.13	1.13	1.13	1.13	0.03	0.00	0.03
71	1K	0.018	-0.055	0.001	-0.152	0.568	2.779	1.13	1.13	1.13	1.13	0.01	0.00	0.02
71	1L	0.006	-0.055	-0.050	-0.152	0.568	2.779	1.13	1.13	1.13	1.13	0.01	0.00	0.02
71	2	0.018	-0.213	-0.050	-0.549	4.019	7.747	1.13	1.13	1.13	1.13	0.05	0.00	0.06
71	7	-0.007	-0.197	-0.051	-0.512	3.708	6.792	1.13	1.13	1.13	1.13	0.04	0.00	0.06
72	1A	-0.176	-5.075	-0.238	-6.170	60.515	38.538	1.13	1.13	1.13	1.13	0.56	0.00	0.50
72	1B	-0.583	-5.075	-0.796	-6.170	60.515	38.538	1.13	1.13	1.13	1.13	0.55	0.00	0.50
72	1C	-0.176	0.222	-0.238	1.570	60.515	38.538	1.13	1.13	1.13	1.13	0.14	0.00	0.49
72	1D	-0.583	0.222	-0.796	1.570	60.515	38.538	1.13	1.13	1.13	1.13	0.13	0.00	0.45
72	1I	-0.215	-5.476	-0.294	-6.574	60.515	38.538	1.13	1.13	1.13	1.13	0.59	0.00	0.50
72	1J	-0.544	-5.476	-0.739	-6.574	60.515	38.538	1.13	1.13	1.13	1.13	0.59	0.00	0.50
72	1K	-0.215	0.623	-0.294	1.974	60.515	38.538	1.13	1.13	1.13	1.13	0.18	0.00	0.50
72	1L	-0.544	0.623	-0.739	1.974	60.515	38.538	1.13	1.13	1.13	1.13	0.17	0.00	0.48
72	2	-0.559	-4.058	-0.861	-3.710	111.414	136.966	1.13	1.13	1.13	1.13	3.39	0.35	0.92
72	7	-0.237	-2.519	-0.140	-1.914	62.914	32.483	1.13	1.13	1.13	1.13	0.22	0.00	0.52













# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

113	1D	-0.002	-0.418	-0.085	0.452	10.086	3.042	1.13	1.13	1.13	1.13	0.04	0.00	0.08
113	1I	0.019	-0.690	-0.028	0.193	10.459	5.272	1.13	1.13	1.13	1.13	0.06	0.00	0.09
113	1J	-0.001	-0.690	-0.088	0.193	10.459	5.272	1.13	1.13	1.13	1.13	0.06	0.00	0.09
113	1K	0.019	-0.397	-0.028	0.500	10.135	3.512	1.13	1.13	1.13	1.13	0.05	0.00	0.08
113	1L	-0.001	-0.397	-0.088	0.500	10.135	3.512	1.13	1.13	1.13	1.13	0.04	0.00	0.08
113	2	0.011	-1.087	-0.127	0.504	20.226	3.951	1.13	1.13	1.13	1.13	0.10	0.00	0.17
113	7	-0.023	-0.943	-0.113	0.572	17.474	4.278	1.13	1.13	1.13	1.13	0.08	0.00	0.15

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

114	1A	-0.014	-0.882	-0.029	0.591	4.564	8.001	1.13	1.13	1.13	1.13	0.08	0.00	0.07
114	1B	-0.031	-0.882	-0.081	0.591	4.564	8.001	1.13	1.13	1.13	1.13	0.08	0.00	0.07
114	1C	-0.014	-0.589	-0.029	0.809	5.135	7.747	1.13	1.13	1.13	1.13	0.07	0.00	0.06
114	1D	-0.031	-0.589	-0.081	0.809	5.135	7.747	1.13	1.13	1.13	1.13	0.07	0.00	0.06
114	1I	-0.012	-0.893	-0.028	0.594	4.389	8.297	1.13	1.13	1.13	1.13	0.08	0.00	0.07
114	1J	-0.033	-0.893	-0.081	0.594	4.389	8.297	1.13	1.13	1.13	1.13	0.08	0.00	0.07
114	1K	-0.012	-0.578	-0.028	0.806	5.180	6.980	1.13	1.13	1.13	1.13	0.07	0.00	0.06
114	1L	-0.033	-0.578	-0.081	0.806	5.180	6.980	1.13	1.13	1.13	1.13	0.07	0.00	0.06
114	2	-0.043	-1.455	-0.122	1.213	9.242	15.924	1.13	1.13	1.13	1.13	0.13	0.00	0.13
114	7	-0.030	-1.244	-0.106	1.193	8.578	12.224	1.13	1.13	1.13	1.13	0.11	0.00	0.10

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

115	1A	0.123	-0.106	0.044	-0.131	3.373	2.295	1.13	1.13	1.13	1.13	0.01	0.00	0.03
115	1B	0.019	-0.106	0.018	-0.131	3.373	2.295	1.13	1.13	1.13	1.13	0.01	0.00	0.03
115	1C	0.123	-0.016	0.044	0.031	2.574	3.508	1.13	1.13	1.13	1.13	0.01	0.00	0.03
115	1D	0.019	-0.016	0.018	0.031	2.574	3.508	1.13	1.13	1.13	1.13	0.01	0.00	0.03
115	1I	0.111	-0.112	0.044	-0.146	3.866	2.155	1.13	1.13	1.13	1.13	0.01	0.00	0.03
115	1J	0.031	-0.112	0.018	-0.146	3.866	2.155	1.13	1.13	1.13	1.13	0.01	0.00	0.03
115	1K	0.111	-0.009	0.044	0.046	2.568	3.656	1.13	1.13	1.13	1.13	0.01	0.00	0.03
115	1L	0.031	-0.009	0.018	0.046	2.568	3.656	1.13	1.13	1.13	1.13	0.01	0.00	0.03
115	2	0.098	-0.114	0.049	-0.095	4.608	5.919	1.13	1.13	1.13	1.13	0.01	0.00	0.05
115	7	0.052	-0.079	0.015	0.039	2.247	5.986	1.13	1.13	1.13	1.13	0.01	0.00	0.05

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

116	1A	0.058	-0.647	0.119	-0.152	7.607	2.287	1.13	1.13	1.13	1.13	0.06	0.00	0.06
116	1B	0.019	-0.647	0.023	-0.152	7.607	2.287	1.13	1.13	1.13	1.13	0.06	0.00	0.06
116	1C	0.058	-0.273	0.119	-0.029	3.853	1.343	1.13	1.13	1.13	1.13	0.03	0.00	0.03
116	1D	0.019	-0.273	0.023	-0.029	3.853	1.343	1.13	1.13	1.13	1.13	0.03	0.00	0.03
116	1I	0.055	-0.715	0.108	-0.148	8.240	2.071	1.13	1.13	1.13	1.13	0.07	0.00	0.07
116	1J	0.023	-0.715	0.035	-0.148	8.240	2.071	1.13	1.13	1.13	1.13	0.07	0.00	0.07
116	1K	0.055	-0.205	0.108	-0.033	3.027	1.237	1.13	1.13	1.13	1.13	0.02	0.00	0.03
116	1L	0.023	-0.205	0.035	-0.033	3.027	1.237	1.13	1.13	1.13	1.13	0.02	0.00	0.03
116	2	0.061	-0.805	0.098	-0.160	9.931	3.476	1.13	1.13	1.13	1.13	0.07	0.00	0.08
116	7	0.018	-0.365	0.052	-0.145	4.719	3.351	1.13	1.13	1.13	1.13	0.03	0.00	0.04

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

117	1A	0.026	-0.188	0.111	-0.354	3.045	5.040	1.13	1.13	1.13	1.13	0.03	0.00	0.04
117	1B	-0.000	-0.188	0.016	-0.354	3.045	5.040	1.13	1.13	1.13	1.13	0.03	0.00	0.04
117	1C	0.026	-0.059	0.111	-0.216	2.073	4.307	1.13	1.13	1.13	1.13	0.02	0.00	0.04
117	1D	-0.000	-0.059	0.016	-0.216	2.073	4.307	1.13	1.13	1.13	1.13	0.02	0.00	0.04
117	1I	0.023	-0.209	0.102	-0.402	3.540	5.334	1.13	1.13	1.13	1.13	0.04	0.00	0.04
117	1J	0.003	-0.209	0.025	-0.402	3.540	5.334	1.13	1.13	1.13	1.13	0.04	0.00	0.04
117	1K	0.023	-0.037	0.102	-0.168	1.889	4.465	1.13	1.13	1.13	1.13	0.02	0.00	0.04
117	1L	0.003	-0.037	0.025	-0.168	1.889	4.465	1.13	1.13	1.13	1.13	0.02	0.00	0.04
117	2	0.018	-0.221	0.085	-0.493	3.604	7.725	1.13	1.13	1.13	1.13	0.04	0.00	0.06
117	7	0.010	-0.118	0.047	-0.319	1.854	5.688	1.13	1.13	1.13	1.13	0.03	0.00	0.05

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

118	1A	0.029	-0.791	0.107	-0.213	5.973	2.741	1.13	1.13	1.13	1.13	0.07	0.00	0.05
118	1B	0.014	-0.791	0.012	-0.213	5.973	2.741	1.13	1.13	1.13	1.13	0.07	0.00	0.05
118	1C	0.029	-0.414	0.107	0.021	3.589	1.777	1.13	1.13	1.13	1.13	0.04	0.00	0.03
118	1D	0.014	-0.414	0.012	0.021	3.589	1.777	1.13	1.13	1.13	1.13	0.04	0.00	0.03
118	1I	0.027	-0.873	0.096	-0.290	5.896	3.432	1.13	1.13	1.13	1.13	0.08	0.00	0.05
118	1J	0.016	-0.873	0.022	-0.290	5.896	3.432	1.13	1.13	1.13	1.13	0.08	0.00	0.05
118	1K	0.027	-0.331	0.096	0.098	3.057	2.418	1.13	1.13	1.13	1.13	0.03	0.00	0.03
118	1L	0.016	-0.331	0.022	0.098	3.057	2.418	1.13	1.13	1.13	1.13	0.03	0.00	0.03
118	2	0.031	-1.027	0.077	-0.161	8.838	2.171	1.13	1.13	1.13	1.13	0.09	0.00	0.07
118	7	0.004	-0.541	0.039	-0.067	4.888	1.406	1.13	1.13	1.13	1.13	0.05	0.00	0.04

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

119	1A	0.120	-0.785	0.076	-0.227	3.399	8.528	1.13	1.13	1.13	1.13	0.07	0.00	0.07
119	1B	0.056	-0.785	-0.033	-0.227	3.399	8.528	1.13	1.13	1.13	1.13	0.07	0.00	0.07
119	1C	0.120	-0.460	0.076	0.119	0.972	6.142	1.13	1.13	1.13	1.13	0.04	0.00	0.05
119	1D	0.056	-0.460	-0.033	0.119	0.972	6.142	1.13	1.13	1.13	1.13	0.04	0.00	0.05
119	1I	0.116	-0.748	0.067	-0.191	3.186	9.272	1.13	1.13	1.13	1.13	0.07	0.00	0.08
119	1J	0.060	-0.748	-0.024	-0.191	3.186	9.272	1.13	1.13	1.13	1.13	0.07	0.00	0.08
119	1K	0.116	-0.497	0.067	0.083	1.157	6.183	1.13	1.13	1.13	1.13	0.05	0.00	0.05
119	1L	0.060	-0.497	-0.024	0.083	1.157	6.183	1.13	1.13	1.13	1.13	0.05	0.00	0.05
119	2	0.128	-1.144	0.031	-0.077	3.841	16.977	1.13	1.13	1.13	1.13	0.10	0.00	0.14
119	7	0.081	-1.029	0.009	0.126	2.780	14.337	1.13	1.13	1.13	1.13	0.09	0.00	0.12

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

120	1A	0.022	0.051	0.145	-0.658	4.276	8.668	1.13	1.13	1.13	1.13	0.06	0.00	0.07
120	1B	0.008	0.051	0.036	-0.658	4.276	8.668	1.13	1.13	1.13	1.13	0.06	0.00	0.07
120	1C	0.022	0.143	0.145	-0.174	3.228	9.687	1.13	1.13	1.13	1.13	0.02	0.00	0.08
120	1D	0.008	0.143	0.036	-0.174	3.228	9.687	1.13	1.13	1.13	1.13	0.02	0.00	0.08
120	1I	0.021	0.058	0.138	-0.611	4.401	8.464	1.13	1.13	1.13	1.13	0.06	0.00	0.07
120	1J	0.009	0.058	0.043	-0.611	4.401	8.464	1.13	1.13	1.13	1.13	0.06	0.00	0.07
120	1K	0.021	0.136	0.138	-0.222	3.787	9.168	1.13	1.13	1.13	1.13	0.02	0.00	0.08
120	1L	0.009	0.136	0.043	-0.222	3.787	9.168	1.13	1.13	1.13	1.13	0.02	0.00	0.08
120	2	0.022	0.167	0.133	-0.790	10.233	15.129	1.13	1.13	1.13	1.13	0.07	0.00	0.13
120	7	0.016	0.213	0.088	-0.798	7.882	15.986	1.13	1.13	1.13	1.13	0.07	0.00	0.13

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

121	1A	-0.003	-0.089	-0.003	-0.552	5.025	2.488	1.13	1.13	1.13	1.13	0.05	0.00	0.04
121	1B	-0.020	-0.089	-0.050	-0.552	5.025	2.488	1.13	1.13	1.13	1.13	0.05	0.00	0.04
121	1C	-0.003	0.028	-0.003	-0.289	3.145	2.224	1.13	1.13	1.13	1.13	0.03	0.00	0.03
121	1D	-0.020	0.028	-0.050	-0.289	3.145	2.22							

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

121 1I	-0.001	-0.097	0.001	-0.552	5.057	2.601	1.13	1.13	1.13	1.13	0.05	0.00	0.04
121 1J	-0.023	-0.097	-0.053	-0.552	5.057	2.601	1.13	1.13	1.13	1.13	0.05	0.00	0.04
121 1K	-0.001	0.036	0.001	-0.289	3.098	2.220	1.13	1.13	1.13	1.13	0.03	0.00	0.03
121 1L	-0.023	0.036	-0.053	-0.289	3.098	2.220	1.13	1.13	1.13	1.13	0.03	0.00	0.03
121 2	-0.020	-0.063	-0.055	-0.892	8.961	3.501	1.13	1.13	1.13	1.13	0.08	0.00	0.07
121 7	-0.013	-0.058	-0.060	-0.801	7.875	2.477	1.13	1.13	1.13	1.13	0.07	0.00	0.07
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
122 1A	0.019	-0.406	-0.002	-0.147	6.008	2.492	1.13	1.13	1.13	1.13	0.04	0.00	0.05
122 1B	0.010	-0.406	-0.043	-0.147	6.008	2.492	1.13	1.13	1.13	1.13	0.04	0.00	0.05
122 1C	0.019	-0.194	-0.002	-0.034	3.912	1.373	1.13	1.13	1.13	1.13	0.02	0.00	0.03
122 1D	0.010	-0.194	-0.043	-0.034	3.912	1.373	1.13	1.13	1.13	1.13	0.02	0.00	0.03
122 1I	0.021	-0.407	0.002	-0.143	5.908	2.536	1.13	1.13	1.13	1.13	0.04	0.00	0.05
122 1J	0.008	-0.407	-0.047	-0.143	5.908	2.536	1.13	1.13	1.13	1.13	0.04	0.00	0.05
122 1K	0.021	-0.193	0.002	-0.039	4.007	1.428	1.13	1.13	1.13	1.13	0.02	0.00	0.03
122 1L	0.008	-0.193	-0.047	-0.039	4.007	1.428	1.13	1.13	1.13	1.13	0.02	0.00	0.03
122 2	0.022	-0.599	-0.045	-0.185	10.615	4.559	1.13	1.13	1.13	1.13	0.05	0.00	0.09
122 7	-0.007	-0.559	-0.046	-0.184	9.743	4.284	1.13	1.13	1.13	1.13	0.05	0.00	0.08
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
123 1A	0.220	-0.295	0.042	-0.609	3.530	1.963	1.13	1.13	1.13	1.13	0.06	0.00	0.03
123 1B	0.131	-0.295	0.007	-0.609	3.530	1.963	1.13	1.13	1.13	1.13	0.06	0.00	0.03
123 1C	0.220	-0.143	0.042	-0.414	3.530	1.963	1.13	1.13	1.13	1.13	0.04	0.00	0.03
123 1D	0.131	-0.143	0.007	-0.414	3.530	1.963	1.13	1.13	1.13	1.13	0.04	0.00	0.03
123 1I	0.232	-0.333	0.044	-0.603	3.530	1.963	1.13	1.13	1.13	1.13	0.06	0.00	0.03
123 1J	0.119	-0.333	0.004	-0.603	3.530	1.963	1.13	1.13	1.13	1.13	0.05	0.00	0.03
123 1K	0.232	-0.105	0.044	-0.420	3.530	1.963	1.13	1.13	1.13	1.13	0.04	0.00	0.03
123 1L	0.119	-0.105	0.004	-0.420	3.530	1.963	1.13	1.13	1.13	1.13	0.04	0.00	0.03
123 2	0.323	-0.431	0.052	-1.085	6.845	4.493	1.13	1.13	1.13	1.13	0.10	0.00	0.06
123 7	0.245	-0.275	0.052	-0.871	6.120	3.236	1.13	1.13	1.13	1.13	0.08	0.00	0.05
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
124 1A	0.032	-0.764	-0.007	-0.115	3.363	1.367	1.13	1.13	1.13	1.13	0.07	0.00	0.03
124 1B	0.026	-0.764	-0.049	-0.115	3.363	1.367	1.13	1.13	1.13	1.13	0.07	0.00	0.03
124 1C	0.032	-0.543	-0.007	0.007	2.283	0.425	1.13	1.13	1.13	1.13	0.05	0.00	0.02
124 1D	0.026	-0.543	-0.049	0.007	2.283	0.425	1.13	1.13	1.13	1.13	0.05	0.00	0.02
124 1I	0.034	-0.737	-0.001	-0.111	3.309	1.290	1.13	1.13	1.13	1.13	0.07	0.00	0.03
124 1J	0.025	-0.737	-0.055	-0.111	3.309	1.290	1.13	1.13	1.13	1.13	0.07	0.00	0.03
124 1K	0.034	-0.571	-0.001	0.003	2.598	0.397	1.13	1.13	1.13	1.13	0.05	0.00	0.02
124 1L	0.025	-0.571	-0.055	0.003	2.598	0.397	1.13	1.13	1.13	1.13	0.05	0.00	0.02
124 2	0.050	-1.258	-0.056	-0.107	5.917	1.076	1.13	1.13	1.13	1.13	0.11	0.00	0.05
124 7	0.033	-1.117	-0.053	-0.078	5.934	0.868	1.13	1.13	1.13	1.13	0.10	0.00	0.05
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
125 1A	-0.025	-0.087	-0.195	-0.045	3.589	0.012	1.13	1.13	1.13	1.13	0.01	0.00	0.03
125 1B	-0.081	-0.087	-0.332	-0.045	3.589	0.012	1.13	1.13	1.13	1.13	0.01	0.00	0.03
125 1C	-0.025	-0.048	-0.195	-0.016	3.589	0.012	1.13	1.13	1.13	1.13	0.01	0.00	0.03
125 1D	-0.081	-0.048	-0.332	-0.016	3.589	0.012	1.13	1.13	1.13	1.13	0.01	0.00	0.03
125 1I	-0.018	-0.096	-0.171	-0.053	3.589	0.012	1.13	1.13	1.13	1.13	0.01	0.00	0.03
125 1J	-0.088	-0.096	-0.356	-0.053	3.589	0.012	1.13	1.13	1.13	1.13	0.01	0.00	0.03
125 1K	-0.018	-0.038	-0.171	-0.008	3.589	0.012	1.13	1.13	1.13	1.13	0.01	0.00	0.03
125 1L	-0.088	-0.038	-0.356	-0.008	3.589	0.012	1.13	1.13	1.13	1.13	0.01	0.00	0.03
125 2	-0.101	-0.133	-0.474	-0.058	7.132	0.325	1.13	1.13	1.13	1.13	0.01	0.00	0.06
125 7	-0.087	-0.096	-0.348	-0.040	5.095	0.183	1.13	1.13	1.13	1.13	0.01	0.00	0.04
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
126 1A	0.039	-0.417	0.154	-1.508	11.942	31.241	1.13	1.13	1.13	1.13	0.14	0.00	0.26
126 1B	0.018	-0.417	0.029	-1.508	11.942	31.241	1.13	1.13	1.13	1.13	0.14	0.00	0.26
126 1C	0.039	0.162	0.154	0.409	12.208	2.445	1.13	1.13	1.13	1.13	0.04	0.00	0.10
126 1D	0.018	0.162	0.029	0.409	12.208	2.445	1.13	1.13	1.13	1.13	0.04	0.00	0.10
126 1I	0.039	-0.609	0.139	-2.076	18.106	47.683	1.13	1.13	1.13	1.13	0.19	0.00	0.40
126 1J	0.019	-0.609	0.044	-2.076	18.106	47.683	1.13	1.13	1.13	1.13	0.19	0.00	0.40
126 1K	0.039	0.354	0.139	0.977	20.550	2.786	1.13	1.13	1.13	1.13	0.09	0.00	0.17
126 1L	0.019	0.354	0.044	0.977	20.550	2.786	1.13	1.13	1.13	1.13	0.09	0.00	0.17
126 2	0.046	-0.227	0.134	-0.956	16.508	16.385	1.13	1.13	1.13	1.13	0.08	0.00	0.14
126 7	0.014	0.379	0.077	-1.549	31.276	22.605	1.13	1.13	1.13	1.13	0.14	0.00	0.26
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
127 1A	-0.015	-0.080	-0.004	-0.208	6.137	5.581	1.13	1.13	1.13	1.13	0.02	0.00	0.05
127 1B	-0.032	-0.080	-0.049	-0.208	6.137	5.581	1.13	1.13	1.13	1.13	0.02	0.00	0.05
127 1C	-0.015	-0.054	-0.004	-0.130	5.159	5.306	1.13	1.13	1.13	1.13	0.01	0.00	0.04
127 1D	-0.032	-0.054	-0.049	-0.130	5.159	5.306	1.13	1.13	1.13	1.13	0.01	0.00	0.04
127 1I	-0.011	-0.090	0.001	-0.224	6.301	5.128	1.13	1.13	1.13	1.13	0.02	0.00	0.05
127 1J	-0.036	-0.090	-0.054	-0.224	6.301	5.128	1.13	1.13	1.13	1.13	0.02	0.00	0.05
127 1K	-0.011	-0.043	0.001	-0.114	4.932	5.475	1.13	1.13	1.13	1.13	0.01	0.00	0.05
127 1L	-0.036	-0.043	-0.054	-0.114	4.932	5.475	1.13	1.13	1.13	1.13	0.01	0.00	0.05
127 2	-0.043	-0.128	-0.054	-0.342	10.643	12.325	1.13	1.13	1.13	1.13	0.03	0.00	0.10
127 7	-0.033	-0.093	-0.054	-0.257	8.674	9.559	1.13	1.13	1.13	1.13	0.02	0.00	0.08
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
128 1A	0.067	-0.386	0.137	-0.701	7.860	6.973	1.13	1.13	1.13	1.13	0.07	0.00	0.07
128 1B	-0.009	-0.386	0.043	-0.701	7.860	6.973	1.13	1.13	1.13	1.13	0.06	0.00	0.07
128 1C	0.067	0.227	0.137	-0.229	9.171	3.554	1.13	1.13	1.13	1.13	0.02	0.00	0.08
128 1D	-0.009	0.227	0.043	-0.229	9.171	3.554	1.13	1.13	1.13	1.13	0.02	0.00	0.08
128 1I	0.061	-0.544	0.121	-0.757	6.829	9.918	1.13	1.13	1.13	1.13	0.07	0.00	0.08
128 1J	-0.004	-0.544	0.059	-0.757	6.829	9.918	1.13	1.13	1.13	1.13	0.07	0.00	0.08
128 1K	0.061	0.385	0.121	-0.173	7.863	6.340	1.13	1.13	1.13	1.13	0.04	0.00	0.07
128 1L	-0.004	0.385	0.059	-0.173	7.863	6.340	1.13	1.13	1.13	1.13	0.04	0.00	0.07
128 2	0.046	-0.125	0.131	-0.807	14.525	4.083	1.13	1.13	1.13	1.13	0.07	0.00	0.12
128 7	0.015	0.098	0.073	-1.097	11.874	6.486	1.13	1.13	1.13	1.13	0.10	0.00	0.10
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
129 1A	-0.022	-0.017	-0.026	-0.430	2.603	13.734	1.13	1.13	1.13	1.13	0.04	0.00	0.11
129 1B	-0.033	-0.017	-0.072	-0.430	2.603	13.734	1.13	1.13	1.13	1.13	0.04	0.00	0.11
129 1C	-0.022	0.098	-0.026	-0.167	1.750	12.442	1.13	1.13	1.13	1.13	0.01	0.00	0.10
129 1D	-0.033	0.098	-0.072	-0.167	1.750	12.442	1.13	1.13	1.13	1.13	0.01	0.00	0.10
129 1I	-0.018	-0.040	-0.024	-0.438	1.850	14.541	1.13	1.13	1.13	1.13	0.04	0.00	0.12

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

129	1J	-0.036	-0.040	-0.074	-0.438	1.850	14.541	1.13	1.13	1.13	1.13	0.04	0.00	0.12
129	1K	-0.018	0.120	-0.024	-0.159	1.258	13.221	1.13	1.13	1.13	1.13	0.01	0.00	0.11
129	1L	-0.036	0.120	-0.074	-0.159	1.258	13.221	1.13	1.13	1.13	1.13	0.01	0.00	0.11
129	2	-0.051	0.088	-0.103	-0.723	7.181	29.378	1.13	1.13	1.13	1.13	0.06	0.00	0.24
129	7	-0.038	0.151	-0.090	-0.546	0.361	28.409	1.13	1.13	1.13	1.13	0.05	0.00	0.24
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
130	1A	0.560	-3.290	0.222	-3.676	25.950	6.791	1.13	1.13	1.13	1.13	0.34	0.00	0.22
130	1B	0.323	-3.290	-0.736	-3.676	25.950	6.791	1.13	1.13	1.13	1.13	0.33	0.00	0.22
130	1C	0.560	-1.640	0.222	-0.850	25.950	6.791	1.13	1.13	1.13	1.13	0.16	0.00	0.22
130	1D	0.323	-1.640	-0.736	-0.850	25.950	6.791	1.13	1.13	1.13	1.13	0.15	0.00	0.22
130	1I	0.528	-3.514	0.139	-3.914	25.095	7.826	1.13	1.13	1.13	1.13	0.36	0.00	0.21
130	1J	0.355	-3.514	-0.653	-3.914	25.095	7.826	1.13	1.13	1.13	1.13	0.35	0.00	0.21
130	1K	0.528	-1.417	0.139	-0.611	25.095	7.826	1.13	1.13	1.13	1.13	0.13	0.00	0.21
130	1L	0.355	-1.417	-0.653	-0.611	25.095	7.826	1.13	1.13	1.13	1.13	0.13	0.00	0.21
130	2	0.673	-4.279	-0.278	-3.125	16.081	34.363	1.13	1.13	1.13	1.13	0.38	0.00	0.29
130	7	0.189	-2.807	-0.364	-1.251	11.070	33.114	1.13	1.13	1.13	1.13	0.25	0.00	0.27
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
131	1A	-0.318	-0.430	-0.720	-0.331	8.776	7.452	1.13	1.13	1.13	1.13	0.04	0.00	0.07
131	1B	-0.422	-0.430	-1.218	-0.331	8.776	7.452	1.13	1.13	1.13	1.13	0.03	0.00	0.07
131	1C	-0.318	-0.278	-0.720	-0.097	8.776	7.452	1.13	1.13	1.13	1.13	0.02	0.00	0.07
131	1D	-0.422	-0.278	-1.218	-0.097	8.776	7.452	1.13	1.13	1.13	1.13	0.02	0.00	0.07
131	1I	-0.288	-0.411	-0.650	-0.352	8.776	7.452	1.13	1.13	1.13	1.13	0.03	0.00	0.07
131	1J	-0.451	-0.411	-1.288	-0.352	8.776	7.452	1.13	1.13	1.13	1.13	0.03	0.00	0.07
131	1K	-0.288	-0.296	-0.650	-0.076	8.776	7.452	1.13	1.13	1.13	1.13	0.02	0.00	0.07
131	1L	-0.451	-0.296	-1.288	-0.076	8.776	7.452	1.13	1.13	1.13	1.13	0.02	0.00	0.07
131	2	-0.623	-0.799	-1.776	-0.477	17.615	15.098	1.13	1.13	1.13	1.13	0.06	0.00	0.14
131	7	-0.391	-0.655	-1.319	-0.229	17.421	14.603	1.13	1.13	1.13	1.13	0.05	0.00	0.14
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
132	1A	0.883	-2.423	1.729	-1.560	9.821	42.982	1.13	1.13	1.13	1.13	0.23	0.01	0.36
132	1B	0.303	-2.423	0.847	-1.560	9.821	42.982	1.13	1.13	1.13	1.13	0.22	0.01	0.36
132	1C	0.883	0.682	1.729	1.250	9.821	42.982	1.13	1.13	1.13	1.13	0.13	0.01	0.36
132	1D	0.303	0.682	0.847	1.250	9.821	42.982	1.13	1.13	1.13	1.13	0.12	0.01	0.36
132	1I	0.803	-2.998	1.614	-2.154	9.821	42.982	1.13	1.13	1.13	1.13	0.28	0.00	0.36
132	1J	0.384	-2.998	0.962	-2.154	9.821	42.982	1.13	1.13	1.13	1.13	0.28	0.00	0.36
132	1K	0.803	1.256	1.614	1.844	9.821	42.982	1.13	1.13	1.13	1.13	0.19	0.00	0.36
132	1L	0.384	1.256	0.962	1.844	9.821	42.982	1.13	1.13	1.13	1.13	0.18	0.00	0.36
132	2	0.898	-1.730	2.074	-0.340	20.723	94.011	1.13	1.13	1.13	1.13	0.16	0.00	0.79
132	7	0.745	-1.498	0.863	0.567	4.653	31.561	1.13	1.13	1.13	1.13	0.14	0.00	0.26
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
133	1A	-0.015	-0.574	-0.615	-0.028	1.009	6.161	1.13	1.13	1.13	1.13	0.05	0.00	0.03
133	1B	-0.134	-0.574	-0.979	-0.028	1.009	6.161	1.13	1.13	1.13	1.13	0.05	0.00	0.03
133	1C	-0.015	-0.381	-0.615	0.087	1.009	6.161	1.13	1.13	1.13	1.13	0.03	0.00	0.04
133	1D	-0.134	-0.381	-0.979	0.087	1.009	6.161	1.13	1.13	1.13	1.13	0.03	0.00	0.03
133	1I	-0.005	-0.595	-0.549	-0.031	1.009	6.161	1.13	1.13	1.13	1.13	0.05	0.00	0.03
133	1J	-0.143	-0.595	-1.045	-0.031	1.009	6.161	1.13	1.13	1.13	1.13	0.05	0.00	0.03
133	1K	-0.005	-0.360	-0.549	0.090	1.009	6.161	1.13	1.13	1.13	1.13	0.03	0.00	0.04
133	1L	-0.143	-0.360	-1.045	0.090	1.009	6.161	1.13	1.13	1.13	1.13	0.03	0.00	0.03
133	2	-0.101	-1.018	-1.412	0.066	1.486	11.710	1.13	1.13	1.13	1.13	0.09	0.00	0.05
133	7	-0.073	-0.756	-1.033	0.045	2.135	12.290	1.13	1.13	1.13	1.13	0.07	0.00	0.05
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
134	1A	0.051	-1.090	0.145	-1.629	11.491	13.082	1.13	1.13	1.13	1.13	0.15	0.00	0.11
134	1B	-0.014	-1.090	0.045	-1.629	11.491	13.082	1.13	1.13	1.13	1.13	0.15	0.00	0.11
134	1C	0.051	-0.180	0.145	-0.599	7.002	16.266	1.13	1.13	1.13	1.13	0.06	0.00	0.14
134	1D	-0.014	-0.180	0.045	-0.599	7.002	16.266	1.13	1.13	1.13	1.13	0.05	0.00	0.14
134	1I	0.046	-1.025	0.137	-1.598	11.301	13.804	1.13	1.13	1.13	1.13	0.15	0.00	0.12
134	1J	-0.010	-1.025	0.054	-1.598	11.301	13.804	1.13	1.13	1.13	1.13	0.15	0.00	0.12
134	1K	0.046	-0.245	0.137	-0.631	7.146	14.632	1.13	1.13	1.13	1.13	0.06	0.00	0.12
134	1L	-0.010	-0.245	0.054	-0.631	7.146	14.632	1.13	1.13	1.13	1.13	0.06	0.00	0.12
134	2	0.027	-1.093	0.140	-2.080	16.112	19.029	1.13	1.13	1.13	1.13	0.18	0.00	0.16
134	7	0.014	-0.773	0.093	-1.921	14.090	14.621	1.13	1.13	1.13	1.13	0.17	0.00	0.12
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
135	1A	0.729	-3.655	0.362	-4.361	111.105	22.883	1.13	1.13	1.13	1.13	0.40	0.00	0.93
135	1B	0.209	-3.655	0.174	-4.361	111.105	22.883	1.13	1.13	1.13	1.13	0.40	0.00	0.93
135	1C	0.729	0.091	0.362	-1.363	111.105	22.883	1.13	1.13	1.13	1.13	0.13	0.00	0.93
135	1D	0.209	0.091	0.174	-1.363	111.105	22.883	1.13	1.13	1.13	1.13	0.13	0.00	0.93
135	1I	0.681	-3.590	0.340	-4.224	113.930	23.302	1.13	1.13	1.13	1.13	0.39	0.00	0.95
135	1J	0.257	-3.590	0.196	-4.224	113.930	23.302	1.13	1.13	1.13	1.13	0.39	0.00	0.95
135	1K	0.681	0.025	0.340	-1.500	113.930	23.302	1.13	1.13	1.13	1.13	0.14	0.00	0.95
135	1L	0.257	0.025	0.196	-1.500	113.930	23.302	1.13	1.13	1.13	1.13	0.14	0.00	0.95
135	2	0.716	-3.585	0.433	-5.337	157.605	46.576	1.13	4.52	1.13	1.13	0.47	0.00	0.95
135	7	0.411	-3.440	0.087	-3.971	119.619	6.484	1.13	1.13	1.13	1.13	0.35	0.00	1.00
Spess.= 30.0 cm		Axxinf= --		Axxsup= 3 d 12/20		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
136	1A	0.020	-1.136	0.072	-0.039	0.685	1.609	1.13	1.13	1.13	1.13	0.10	0.00	0.01
136	1B	-0.060	-1.136	0.024	-0.039	0.685	1.609	1.13	1.13	1.13	1.13	0.10	0.00	0.01
136	1C	0.020	-0.571	0.072	0.000	0.685	1.609	1.13	1.13	1.13	1.13	0.05	0.00	0.01
136	1D	-0.060	-0.571	0.024	0.000	0.685	1.609	1.13	1.13	1.13	1.13	0.05	0.00	0.01
136	1I	0.009	-1.272	0.068	-0.059	0.154	2.605	1.13	1.13	1.13	1.13	0.12	0.00	0.02
136	1J	-0.049	-1.272	0.028	-0.059	0.154	2.605	1.13	1.13	1.13	1.13	0.11	0.00	0.02
136	1K	0.009	-0.436	0.068	0.019	0.154	2.605	1.13	1.13	1.13	1.13	0.04	0.00	0.02
136	1L	-0.049	-0.436	0.028	0.019	0.154	2.605	1.13	1.13	1.13	1.13	0.04	0.00	0.02
136	2	-0.035	-1.463	0.063	0.033	1.202	2.323	1.13	1.13	1.13	1.13	0.13	0.00	0.02
136	7	0.002	-0.738	0.033	-0.072	0.975	1.997	1.13	1.13	1.13	1.13	0.06	0.00	0.02
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
137	1A	0.039	-0.095	0.029	-0.164	4.547	0.412	1.13	1.13	1.13	1.13	0.02	0.00	0.04
137	1B	-0.015	-0.095	0.008	-0.164	4.547	0.412	1.13	1.13	1.13	1.13	0.01	0.00	0.04
137	1C	0.039	0.049	0.029	-0.122	4.547	0.412	1.13	1.13	1.13	1.13	0.01	0.00	0.04
137	1D	-0.015	0.049	0.008	-0.122	4.547	0.412	1.13	1.13	1.13	1.13	0.01	0.00	0.04
137	1I	0.034	-0.146	0.027	-0.179	4.280	0.429	1.13	1.13	1.13	1.13	0.02	0.00	0.04

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

137	1K	0.034	0.101	0.027	-0.107	4.280	0.429	1.13	1.13	1.13	1.13	0.01	0.00	0.04
137	1L	-0.009	0.101	0.010	-0.107	4.280	0.429	1.13	1.13	1.13	1.13	0.01	0.00	0.04
137	2	0.016	-0.039	0.021	-0.249	8.362	0.618	1.13	1.13	1.13	1.13	0.02	0.00	0.07
137	7	0.006	-0.028	0.029	-0.128	4.581	0.671	1.13	1.13	1.13	1.13	0.01	0.00	0.04
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayyup= --	(e arm. base nelle due direz.)							
138	1A	0.124	-0.042	-0.007	-0.745	1.531	0.520	1.13	1.13	1.13	1.13	0.07	0.00	0.01
138	1B	0.024	-0.042	-0.092	-0.745	1.531	0.520	1.13	1.13	1.13	1.13	0.07	0.00	0.01
138	1C	0.124	0.080	-0.007	-0.443	1.531	0.520	1.13	1.13	1.13	1.13	0.04	0.00	0.01
138	1D	0.024	0.080	-0.092	-0.443	1.531	0.520	1.13	1.13	1.13	1.13	0.04	0.00	0.01
138	1I	0.115	-0.029	-0.013	-0.740	1.002	0.479	1.13	1.13	1.13	1.13	0.07	0.00	0.01
138	1J	0.034	-0.029	-0.086	-0.740	1.002	0.479	1.13	1.13	1.13	1.13	0.07	0.00	0.01
138	1K	0.115	0.067	-0.013	-0.449	1.002	0.479	1.13	1.13	1.13	1.13	0.04	0.00	0.01
138	1L	0.034	0.067	-0.086	-0.449	1.002	0.479	1.13	1.13	1.13	1.13	0.04	0.00	0.01
138	2	0.108	0.042	-0.068	-1.075	2.236	1.218	1.13	1.13	1.13	1.13	0.09	0.00	0.02
138	7	-0.068	0.046	-0.060	-0.859	2.691	2.383	1.13	1.13	1.13	1.13	0.07	0.00	0.02
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayyup= --	(e arm. base nelle due direz.)							
139	1A	0.101	-0.237	0.112	0.103	2.293	8.932	1.13	1.13	1.13	1.13	0.02	0.00	0.07
139	1B	0.041	-0.237	0.025	0.103	2.293	8.932	1.13	1.13	1.13	1.13	0.02	0.00	0.07
139	1C	0.101	0.036	0.112	0.539	2.318	2.172	1.13	1.13	1.13	1.13	0.05	0.00	0.02
139	1D	0.041	0.036	0.025	0.539	2.318	2.172	1.13	1.13	1.13	1.13	0.05	0.00	0.02
139	1I	0.096	-0.231	0.109	0.159	2.272	8.420	1.13	1.13	1.13	1.13	0.02	0.00	0.07
139	1J	0.047	-0.231	0.028	0.159	2.272	8.420	1.13	1.13	1.13	1.13	0.02	0.00	0.07
139	1K	0.096	0.029	0.109	0.483	2.491	2.563	1.13	1.13	1.13	1.13	0.05	0.00	0.02
139	1L	0.047	0.029	0.028	0.483	2.491	2.563	1.13	1.13	1.13	1.13	0.04	0.00	0.02
139	2	0.106	-0.187	0.102	0.537	8.372	10.608	1.13	1.13	1.13	1.13	0.05	0.00	0.09
139	7	0.051	-0.318	0.085	0.535	7.989	11.061	1.13	1.13	1.13	1.13	0.05	0.00	0.09
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayyup= --	(e arm. base nelle due direz.)							
140	1A	0.135	0.297	0.037	-0.186	4.751	0.160	1.13	1.13	1.13	1.13	0.03	0.00	0.04
140	1B	0.049	0.297	0.014	-0.186	4.751	0.160	1.13	1.13	1.13	1.13	0.03	0.00	0.04
140	1C	0.135	0.773	0.037	-0.059	2.678	2.534	1.13	1.13	1.13	1.13	0.07	0.00	0.02
140	1D	0.049	0.773	0.014	-0.059	2.678	2.534	1.13	1.13	1.13	1.13	0.07	0.00	0.02
140	1I	0.131	0.340	0.034	-0.185	4.916	0.358	1.13	1.13	1.13	1.13	0.03	0.00	0.04
140	1J	0.053	0.340	0.016	-0.185	4.916	0.358	1.13	1.13	1.13	1.13	0.03	0.00	0.04
140	1K	0.131	0.730	0.034	-0.060	2.795	2.014	1.13	1.13	1.13	1.13	0.07	0.00	0.02
140	1L	0.053	0.730	0.016	-0.060	2.795	2.014	1.13	1.13	1.13	1.13	0.07	0.00	0.02
140	2	0.137	0.920	0.038	-0.220	6.731	6.718	1.13	1.13	1.13	1.13	0.08	0.00	0.06
140	7	0.089	0.741	0.012	-0.237	7.230	6.887	1.13	1.13	1.13	1.13	0.07	0.00	0.06
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayyup= --	(e arm. base nelle due direz.)							
141	1A	0.026	0.048	0.104	0.843	0.140	6.324	1.13	1.13	1.13	1.13	0.08	0.00	0.05
141	1B	0.006	0.048	0.042	0.843	0.140	6.324	1.13	1.13	1.13	1.13	0.08	0.00	0.05
141	1C	0.026	0.192	0.104	1.235	0.407	4.278	1.13	1.13	1.13	1.13	0.11	0.00	0.04
141	1D	0.006	0.192	0.042	1.235	0.407	4.278	1.13	1.13	1.13	1.13	0.11	0.00	0.04
141	1I	0.025	0.048	0.103	0.883	0.181	6.261	1.13	1.13	1.13	1.13	0.08	0.00	0.05
141	1J	0.007	0.048	0.043	0.883	0.181	6.261	1.13	1.13	1.13	1.13	0.08	0.00	0.05
141	1K	0.025	0.192	0.103	1.195	0.430	4.300	1.13	1.13	1.13	1.13	0.11	0.00	0.04
141	1L	0.007	0.192	0.043	1.195	0.430	4.300	1.13	1.13	1.13	1.13	0.11	0.00	0.04
141	2	0.024	0.221	0.104	1.862	0.008	9.473	1.13	1.13	1.13	1.13	0.16	0.00	0.08
141	7	0.008	0.277	0.060	1.533	0.120	8.807	1.13	1.13	1.13	1.13	0.13	0.00	0.07
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayyup= --	(e arm. base nelle due direz.)							
142	1A	-0.021	-0.332	-0.031	0.054	8.563	4.023	1.13	1.13	1.13	1.13	0.03	0.00	0.07
142	1B	-0.033	-0.332	-0.075	0.054	8.563	4.023	1.13	1.13	1.13	1.13	0.03	0.00	0.07
142	1C	-0.021	-0.231	-0.031	0.352	7.257	3.080	1.13	1.13	1.13	1.13	0.03	0.00	0.06
142	1D	-0.033	-0.231	-0.075	0.352	7.257	3.080	1.13	1.13	1.13	1.13	0.03	0.00	0.06
142	1I	-0.018	-0.335	-0.030	0.048	8.307	3.956	1.13	1.13	1.13	1.13	0.03	0.00	0.07
142	1J	-0.035	-0.335	-0.076	0.048	8.307	3.956	1.13	1.13	1.13	1.13	0.03	0.00	0.07
142	1K	-0.018	-0.228	-0.030	0.357	7.367	3.137	1.13	1.13	1.13	1.13	0.03	0.00	0.06
142	1L	-0.035	-0.228	-0.076	0.357	7.367	3.137	1.13	1.13	1.13	1.13	0.03	0.00	0.06
142	2	-0.051	-0.527	-0.115	-0.278	14.722	4.745	1.13	1.13	1.13	1.13	0.05	0.00	0.12
142	7	-0.037	-0.491	-0.099	0.411	14.635	3.993	1.13	1.13	1.13	1.13	0.04	0.00	0.12
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayyup= --	(e arm. base nelle due direz.)							
143	1A	0.030	-0.210	0.066	1.131	4.620	3.452	1.13	1.13	1.13	1.13	0.10	0.00	0.04
143	1B	-0.003	-0.210	0.016	1.131	4.620	3.452	1.13	1.13	1.13	1.13	0.10	0.00	0.04
143	1C	0.030	0.011	0.066	1.358	4.441	5.175	1.13	1.13	1.13	1.13	0.12	0.00	0.04
143	1D	-0.003	0.011	0.016	1.358	4.441	5.175	1.13	1.13	1.13	1.13	0.12	0.00	0.04
143	1I	0.028	-0.214	0.067	1.166	4.508	3.585	1.13	1.13	1.13	1.13	0.11	0.00	0.04
143	1J	-0.001	-0.214	0.015	1.166	4.508	3.585	1.13	1.13	1.13	1.13	0.11	0.00	0.04
143	1K	0.028	0.015	0.067	1.323	4.045	4.947	1.13	1.13	1.13	1.13	0.12	0.00	0.04
143	1L	-0.001	0.015	0.015	1.323	4.045	4.947	1.13	1.13	1.13	1.13	0.12	0.00	0.04
143	2	0.019	-0.183	0.047	2.254	9.017	7.058	1.13	1.13	1.13	1.13	0.20	0.00	0.08
143	7	0.005	0.224	0.014	1.911	8.433	4.448	1.13	1.13	1.13	1.13	0.17	0.00	0.07
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayyup= --	(e arm. base nelle due direz.)							
144	1A	-0.135	-0.166	0.164	-0.491	1.208	0.598	1.13	1.13	1.13	1.13	0.05	0.00	0.01
144	1B	-0.248	-0.166	0.070	-0.491	1.208	0.598	1.13	1.13	1.13	1.13	0.05	0.00	0.01
144	1C	-0.135	-0.238	0.164	-0.213	1.208	0.598	1.13	1.13	1.13	1.13	0.02	0.00	0.01
144	1D	-0.248	-0.238	0.070	-0.213	1.208	0.598	1.13	1.13	1.13	1.13	0.02	0.00	0.01
144	1I	-0.134	-0.264	0.176	-0.494	1.208	0.598	1.13	1.13	1.13	1.13	0.05	0.00	0.01
144	1J	-0.249	-0.264	0.058	-0.494	1.208	0.598	1.13	1.13	1.13	1.13	0.05	0.00	0.01
144	1K	-0.134	-0.140	0.176	-0.211	1.208	0.598	1.13	1.13	1.13	1.13	0.02	0.00	0.01
144	1L	-0.249	-0.140	0.058	-0.211	1.208	0.598	1.13	1.13	1.13	1.13	0.02	0.00	0.01
144	2	-0.377	-0.490	0.197	-0.789	2.368	1.540	1.13	1.13	1.13	1.13	0.07	0.00	0.02
144	7	-0.308	-0.216	0.121	-0.689	2.053	1.088	1.13	1.13	1.13	1.13	0.06	0.00	0.02
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayyup= --	(e arm. base nelle due direz.)							
145	1A	0.012	0.965	0.024	-0.109	1.344	1.749	1.13	1.13	1.13	1.13	0.09	0.00	0.01
145	1B	-0.044	0.965	0.006	-0.109	1.344	1.749	1.13	1.13	1.13	1.13	0.09	0.00	0.01
145	1C	0.012	1.193	0.024	0.015	1.670	1.711	1.13	1.13	1.13	1.13	0.11	0.00	0.01
145	1D	-0.044	1.193	0.006	0.015	1.670	1.711	1.13	1.13	1.13	1.13	0.11	0.00	0.01
145	1I	0.014	0.980	0.024	-0.118	1.407	1.993	1.13	1.13	1.13	1.13	0.09	0.00	0.02
145	1J	-0.046	0.980	0.007	-0.118	1.407	1.993	1.13	1.13	1.13	1.13	0.09	0.00	0.02
145	1K	0.014	1.178	0.024	0.025	1.660								



## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

153	2	-0.082	-0.440	-0.047	-0.170	8.244	4.900	1.13	1.13	1.13	1.13	0.04	0.00	0.07
153	7	-0.060	-0.364	-0.043	-0.128	7.291	3.815	1.13	1.13	1.13	1.13	0.03	0.00	0.06
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --		(e arm. base nelle due direz.)				
154	1A	-0.015	-0.250	-0.004	-0.279	4.973	2.946	1.13	1.13	1.13	1.13	0.03	0.00	0.04
154	1B	-0.033	-0.250	-0.048	-0.279	4.973	2.946	1.13	1.13	1.13	1.13	0.02	0.00	0.04
154	1C	-0.015	-0.160	-0.004	-0.199	3.873	2.304	1.13	1.13	1.13	1.13	0.02	0.00	0.03
154	1D	-0.033	-0.160	-0.048	-0.199	3.873	2.304	1.13	1.13	1.13	1.13	0.02	0.00	0.03
154	1I	-0.012	-0.273	0.000	-0.282	4.967	2.975	1.13	1.13	1.13	1.13	0.03	0.00	0.04
154	1J	-0.036	-0.273	-0.052	-0.282	4.967	2.975	1.13	1.13	1.13	1.13	0.03	0.00	0.04
154	1K	-0.012	-0.137	0.000	-0.195	4.332	2.586	1.13	1.13	1.13	1.13	0.02	0.00	0.04
154	1L	-0.036	-0.137	-0.052	-0.195	4.332	2.586	1.13	1.13	1.13	1.13	0.02	0.00	0.04
154	2	-0.043	-0.391	-0.053	-0.485	7.437	5.218	1.13	1.13	1.13	1.13	0.04	0.00	0.06
154	7	-0.033	-0.308	-0.054	-0.379	6.666	4.086	1.13	1.13	1.13	1.13	0.03	0.00	0.06
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --		(e arm. base nelle due direz.)				
155	1A	0.267	-0.519	1.405	-0.258	1.857	7.934	1.13	1.13	1.13	1.13	0.05	0.00	0.07
155	1B	0.229	-0.519	0.880	-0.258	1.857	7.934	1.13	1.13	1.13	1.13	0.05	0.00	0.07
155	1C	0.267	-0.402	1.405	-0.015	1.857	7.934	1.13	1.13	1.13	1.13	0.04	0.00	0.07
155	1D	0.229	-0.402	0.880	-0.015	1.857	7.934	1.13	1.13	1.13	1.13	0.04	0.00	0.07
155	1I	0.277	-0.509	1.484	-0.264	1.857	7.934	1.13	1.13	1.13	1.13	0.05	0.00	0.07
155	1J	0.219	-0.509	0.801	-0.264	1.857	7.934	1.13	1.13	1.13	1.13	0.05	0.00	0.07
155	1K	0.277	-0.412	1.484	-0.009	1.857	7.934	1.13	1.13	1.13	1.13	0.04	0.00	0.07
155	1L	0.219	-0.412	0.801	-0.009	1.857	7.934	1.13	1.13	1.13	1.13	0.04	0.00	0.07
155	2	0.408	-0.991	2.066	-0.274	2.928	16.278	1.13	1.13	1.13	1.13	0.09	0.00	0.14
155	7	0.228	-0.774	1.487	-0.133	4.225	16.908	1.13	1.13	1.13	1.13	0.07	0.00	0.14
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --		(e arm. base nelle due direz.)				
156	1A	-0.031	0.363	0.036	-0.198	4.611	1.805	1.13	1.13	1.13	1.13	0.03	0.00	0.04
156	1B	-0.079	0.363	0.022	-0.198	4.611	1.805	1.13	1.13	1.13	1.13	0.03	0.00	0.04
156	1C	-0.031	0.615	0.036	-0.050	2.215	0.491	1.13	1.13	1.13	1.13	0.06	0.00	0.02
156	1D	-0.079	0.615	0.022	-0.050	2.215	0.491	1.13	1.13	1.13	1.13	0.05	0.00	0.02
156	1I	-0.030	0.367	0.039	-0.193	4.460	1.820	1.13	1.13	1.13	1.13	0.03	0.00	0.04
156	1J	-0.080	0.367	0.019	-0.193	4.460	1.820	1.13	1.13	1.13	1.13	0.03	0.00	0.04
156	1K	-0.030	0.612	0.039	-0.055	2.362	0.454	1.13	1.13	1.13	1.13	0.06	0.00	0.02
156	1L	-0.080	0.612	0.019	-0.055	2.362	0.454	1.13	1.13	1.13	1.13	0.05	0.00	0.02
156	2	-0.116	0.824	0.048	-0.255	6.124	6.221	1.13	1.13	1.13	1.13	0.07	0.00	0.05
156	7	-0.092	0.947	0.029	-0.273	5.174	7.619	1.13	1.13	1.13	1.13	0.08	0.00	0.06
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --		(e arm. base nelle due direz.)				
157	1A	-0.017	-0.208	-0.007	0.842	3.011	3.114	1.13	1.13	1.13	1.13	0.08	0.00	0.03
157	1B	-0.027	-0.208	-0.046	0.842	3.011	3.114	1.13	1.13	1.13	1.13	0.08	0.00	0.03
157	1C	-0.017	-0.063	-0.007	1.126	2.992	3.760	1.13	1.13	1.13	1.13	0.10	0.00	0.03
157	1D	-0.027	-0.063	-0.046	1.126	2.992	3.760	1.13	1.13	1.13	1.13	0.10	0.00	0.03
157	1I	-0.016	-0.207	-0.007	0.882	3.062	3.330	1.13	1.13	1.13	1.13	0.08	0.00	0.03
157	1J	-0.028	-0.207	-0.046	0.882	3.062	3.330	1.13	1.13	1.13	1.13	0.08	0.00	0.03
157	1K	-0.016	-0.064	-0.007	1.086	2.938	3.543	1.13	1.13	1.13	1.13	0.10	0.00	0.03
157	1L	-0.028	-0.064	-0.046	1.086	2.938	3.543	1.13	1.13	1.13	1.13	0.10	0.00	0.03
157	2	-0.042	-0.260	-0.068	1.766	5.307	6.724	1.13	1.13	1.13	1.13	0.15	0.00	0.06
157	7	-0.027	0.288	-0.049	1.722	4.473	5.328	1.13	1.13	1.13	1.13	0.15	0.00	0.04
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --		(e arm. base nelle due direz.)				
158	1A	0.028	-0.213	0.067	1.059	3.090	0.748	1.13	1.13	1.13	1.13	0.10	0.00	0.03
158	1B	0.018	-0.213	0.024	1.059	3.090	0.748	1.13	1.13	1.13	1.13	0.10	0.00	0.03
158	1C	0.028	-0.073	0.067	1.417	2.164	1.817	1.13	1.13	1.13	1.13	0.13	0.00	0.02
158	1D	0.018	-0.073	0.024	1.417	2.164	1.817	1.13	1.13	1.13	1.13	0.13	0.00	0.02
158	1I	0.029	-0.209	0.065	1.104	3.035	0.793	1.13	1.13	1.13	1.13	0.10	0.00	0.03
158	1J	0.018	-0.209	0.026	1.104	3.035	0.793	1.13	1.13	1.13	1.13	0.10	0.00	0.03
158	1K	0.029	-0.077	0.065	1.373	2.151	1.640	1.13	1.13	1.13	1.13	0.13	0.00	0.02
158	1L	0.018	-0.077	0.026	1.373	2.151	1.640	1.13	1.13	1.13	1.13	0.12	0.00	0.02
158	2	0.038	-0.271	0.059	2.253	4.186	2.245	1.13	1.13	1.13	1.13	0.20	0.00	0.03
158	7	0.023	0.271	0.045	2.113	3.826	1.553	1.13	1.13	1.13	1.13	0.18	0.00	0.03
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --		(e arm. base nelle due direz.)				
159	1A	0.033	-0.202	0.105	0.947	0.904	1.702	1.13	1.13	1.13	1.13	0.09	0.00	0.01
159	1B	0.020	-0.202	0.055	0.947	0.904	1.702	1.13	1.13	1.13	1.13	0.09	0.00	0.01
159	1C	0.033	-0.034	0.105	1.400	0.187	0.652	1.13	1.13	1.13	1.13	0.13	0.00	0.01
159	1D	0.020	-0.034	0.055	1.400	0.187	0.652	1.13	1.13	1.13	1.13	0.13	0.00	0.01
159	1I	0.033	-0.192	0.101	1.009	0.919	1.538	1.13	1.13	1.13	1.13	0.09	0.00	0.01
159	1J	0.020	-0.192	0.059	1.009	0.919	1.538	1.13	1.13	1.13	1.13	0.09	0.00	0.01
159	1K	0.033	-0.043	0.101	1.338	0.285	0.788	1.13	1.13	1.13	1.13	0.12	0.00	0.01
159	1L	0.020	-0.043	0.059	1.338	0.285	0.788	1.13	1.13	1.13	1.13	0.12	0.00	0.01
159	2	0.043	-0.221	0.121	2.122	1.103	2.194	1.13	1.13	1.13	1.13	0.19	0.00	0.02
159	7	0.027	0.257	0.099	1.982	1.443	1.447	1.13	1.13	1.13	1.13	0.17	0.00	0.01
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --		(e arm. base nelle due direz.)				
160	1A	0.128	0.318	0.091	-0.597	4.879	0.458	1.13	1.13	1.13	1.13	0.06	0.00	0.04
160	1B	0.097	0.318	-0.001	-0.597	4.879	0.458	1.13	1.13	1.13	1.13	0.05	0.00	0.04
160	1C	0.128	0.514	0.091	0.224	7.702	5.137	1.13	1.13	1.13	1.13	0.05	0.00	0.06
160	1D	0.097	0.514	-0.001	0.224	7.702	5.137	1.13	1.13	1.13	1.13	0.05	0.00	0.06
160	1I	0.125	0.273	0.079	-0.527	5.738	0.742	1.13	1.13	1.13	1.13	0.05	0.00	0.05
160	1J	0.100	0.273	0.011	-0.527	5.738	0.742	1.13	1.13	1.13	1.13	0.05	0.00	0.05
160	1K	0.125	0.559	0.079	0.154	8.312	4.716	1.13	1.13	1.13	1.13	0.05	0.00	0.07
160	1L	0.100	0.559	0.011	0.154	8.312	4.716	1.13	1.13	1.13	1.13	0.05	0.00	0.07
160	2	0.177	0.657	0.073	-0.301	9.937	5.430	1.13	1.13	1.13	1.13	0.06	0.00	0.08
160	7	0.151	0.628	0.043	-0.234	3.021	5.055	1.13	1.13	1.13	1.13	0.06	0.00	0.04
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --		(e arm. base nelle due direz.)				
161	1A	0.042	-0.231	0.138	0.459	2.826	9.187	1.13	1.13	1.13	1.13	0.04	0.00	0.08
161	1B	0.017	-0.231	0.079	0.459	2.826	9.187	1.13	1.13	1.13	1.13	0.04	0.00	0.08
161	1C	0.042	0.074	0.138	1.039	4.789	11.878	1.13	1.13	1.13	1.13	0.10	0.00	0.10
161	1D	0.017	0.074	0.079	1.039	4.789	11.878	1.13	1.13	1.13	1.13	0.10	0.00	0.10
161	1I	0.040	-0.205	0.132	0.537	3.131	10.329	1.13	1.13	1.13	1.13	0.05	0.00	0.09
161	1J	0.019	-0.205	0.085	0.537	3.131	10.329	1.13	1.13	1.13	1.13	0.05	0.00	0.09
161	1K	0.040	0.048	0.132	0.961	4.217	12.001	1.13	1.13	1.				

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

161	7	0.029	0.229	0.142	1.276	3.677	21.052	1.13	1.13	1.13	1.13	0.11	0.00	0.18
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
162	1A	-0.140	-1.224	0.136	-1.877	4.880	3.800	1.13	1.13	1.13	1.13	0.17	0.00	0.04
162	1B	-0.244	-1.224	-0.029	-1.877	4.880	3.800	1.13	1.13	1.13	1.13	0.17	0.00	0.04
162	1C	-0.140	0.582	0.136	0.140	4.880	3.800	1.13	1.13	1.13	1.13	0.05	0.00	0.04
162	1D	-0.244	0.582	-0.029	0.140	4.880	3.800	1.13	1.13	1.13	1.13	0.05	0.00	0.04
162	1I	-0.150	-1.845	0.110	-2.277	4.880	3.800	1.13	1.13	1.13	1.13	0.21	0.00	0.04
162	1J	-0.234	-1.845	-0.003	-2.277	4.880	3.800	1.13	1.13	1.13	1.13	0.21	0.00	0.04
162	1K	-0.150	1.203	0.110	0.540	4.880	3.800	1.13	1.13	1.13	1.13	0.11	0.00	0.04
162	1L	-0.234	1.203	-0.003	0.540	4.880	3.800	1.13	1.13	1.13	1.13	0.11	0.00	0.04
162	2	-0.313	-0.620	-0.077	-1.604	8.134	6.790	1.13	1.13	1.13	1.13	0.14	0.00	0.07
162	7	-0.122	-1.231	0.111	-1.090	7.686	1.797	1.13	1.13	1.13	1.13	0.11	0.00	0.06
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
163	1A	0.037	-0.148	0.165	-0.409	6.586	4.970	1.13	1.13	1.13	1.13	0.04	0.00	0.06
163	1B	0.024	-0.148	0.074	-0.409	6.586	4.970	1.13	1.13	1.13	1.13	0.04	0.00	0.06
163	1C	0.037	0.010	0.165	0.643	2.236	7.447	1.13	1.13	1.13	1.13	0.06	0.00	0.06
163	1D	0.024	0.010	0.074	0.643	2.236	7.447	1.13	1.13	1.13	1.13	0.06	0.00	0.06
163	1I	0.036	-0.182	0.153	-0.411	7.248	6.852	1.13	1.13	1.13	1.13	0.04	0.00	0.06
163	1J	0.026	-0.182	0.087	-0.411	7.248	6.852	1.13	1.13	1.13	1.13	0.04	0.00	0.06
163	1K	0.036	0.044	0.153	0.644	0.945	10.442	1.13	1.13	1.13	1.13	0.06	0.00	0.09
163	1L	0.026	0.044	0.087	0.644	0.945	10.442	1.13	1.13	1.13	1.13	0.06	0.00	0.09
163	2	0.050	-0.087	0.189	0.094	2.015	2.647	1.13	1.13	1.13	1.13	0.01	0.00	0.02
163	7	0.029	0.266	0.157	0.230	1.185	5.557	1.13	1.13	1.13	1.13	0.02	0.00	0.05
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
164	1A	0.170	-1.467	0.019	-0.686	16.239	6.084	1.13	1.13	1.13	1.13	0.14	0.00	0.14
164	1B	0.063	-1.467	-0.032	-0.686	16.239	6.084	1.13	1.13	1.13	1.13	0.13	0.00	0.14
164	1C	0.170	0.441	0.019	0.115	9.382	3.703	1.13	1.13	1.13	1.13	0.04	0.00	0.08
164	1D	0.063	0.441	-0.032	0.115	9.382	3.703	1.13	1.13	1.13	1.13	0.04	0.00	0.08
164	1I	0.152	-1.703	0.010	-0.890	16.268	5.256	1.13	1.13	1.13	1.13	0.16	0.00	0.14
164	1J	0.080	-1.703	-0.023	-0.890	16.268	5.256	1.13	1.13	1.13	1.13	0.16	0.00	0.14
164	1K	0.152	0.677	0.010	0.319	8.322	1.480	1.13	1.13	1.13	1.13	0.06	0.00	0.07
164	1L	0.080	0.677	-0.023	0.319	8.322	1.480	1.13	1.13	1.13	1.13	0.06	0.00	0.07
164	2	0.181	-1.069	-0.013	-0.537	40.194	4.313	1.13	1.13	1.13	1.13	0.10	0.00	0.34
164	7	0.151	-1.088	0.046	0.406	31.892	0.199	1.13	1.13	1.13	1.13	0.10	0.00	0.27
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
166	1A	0.037	-0.089	0.141	-0.336	2.328	7.763	1.13	1.13	1.13	1.13	0.03	0.00	0.06
166	1B	0.019	-0.089	0.027	-0.336	2.328	7.763	1.13	1.13	1.13	1.13	0.03	0.00	0.06
166	1C	0.037	0.029	0.141	-0.010	3.193	0.186	1.13	1.13	1.13	1.13	0.01	0.00	0.03
166	1D	0.019	0.029	0.027	-0.010	3.193	0.186	1.13	1.13	1.13	1.13	0.01	0.00	0.03
166	1I	0.037	-0.112	0.129	-0.401	4.389	9.710	1.13	1.13	1.13	1.13	0.04	0.00	0.08
166	1J	0.019	-0.112	0.040	-0.401	4.389	9.710	1.13	1.13	1.13	1.13	0.04	0.00	0.08
166	1K	0.037	0.052	0.129	0.056	4.137	1.374	1.13	1.13	1.13	1.13	0.01	0.00	0.03
166	1L	0.019	0.052	0.040	0.056	4.137	1.374	1.13	1.13	1.13	1.13	0.01	0.00	0.03
166	2	0.045	-0.062	0.121	-0.324	1.335	5.992	1.13	1.13	1.13	1.13	0.03	0.00	0.05
166	7	0.013	0.053	0.059	-0.327	2.556	12.428	1.13	1.13	1.13	1.13	0.03	0.00	0.10
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
167	1A	0.086	-0.080	0.087	-0.063	0.988	3.170	1.13	1.13	1.13	1.13	0.01	0.00	0.03
167	1B	0.063	-0.080	-0.016	-0.063	0.988	3.170	1.13	1.13	1.13	1.13	0.01	0.00	0.03
167	1C	0.086	-0.036	0.087	0.025	0.202	0.423	1.13	1.13	1.13	1.13	0.01	0.00	0.00
167	1D	0.063	-0.036	-0.016	0.025	0.202	0.423	1.13	1.13	1.13	1.13	0.01	0.00	0.00
167	1I	0.083	-0.077	0.075	-0.075	0.776	3.389	1.13	1.13	1.13	1.13	0.01	0.00	0.03
167	1J	0.066	-0.077	-0.004	-0.075	0.776	3.389	1.13	1.13	1.13	1.13	0.01	0.00	0.03
167	1K	0.083	-0.038	0.075	0.036	0.473	0.148	1.13	1.13	1.13	1.13	0.01	0.00	0.00
167	1L	0.066	-0.038	-0.004	0.036	0.473	0.148	1.13	1.13	1.13	1.13	0.01	0.00	0.00
167	2	0.103	-0.111	0.056	-0.039	2.610	3.900	1.13	1.13	1.13	1.13	0.01	0.00	0.03
167	7	0.054	-0.101	0.017	-0.033	1.489	9.580	1.13	1.13	1.13	1.13	0.01	0.00	0.08
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
168	1A	0.034	-1.712	0.175	-0.872	8.656	8.068	1.13	1.13	1.13	1.13	0.16	0.00	0.07
168	1B	0.019	-1.712	0.074	-0.872	8.656	8.068	1.13	1.13	1.13	1.13	0.16	0.00	0.07
168	1C	0.034	-0.712	0.175	0.527	5.112	3.641	1.13	1.13	1.13	1.13	0.07	0.00	0.04
168	1D	0.019	-0.712	0.074	0.527	5.112	3.641	1.13	1.13	1.13	1.13	0.06	0.00	0.04
168	1I	0.032	-1.703	0.165	-0.823	10.260	7.581	1.13	1.13	1.13	1.13	0.15	0.00	0.09
168	1J	0.020	-1.703	0.083	-0.823	10.260	7.581	1.13	1.13	1.13	1.13	0.15	0.00	0.09
168	1K	0.032	-0.721	0.165	0.478	4.003	3.113	1.13	1.13	1.13	1.13	0.07	0.00	0.03
168	1L	0.020	-0.721	0.083	0.478	4.003	3.113	1.13	1.13	1.13	1.13	0.07	0.00	0.03
168	2	0.042	-2.219	0.194	-0.443	12.712	12.788	1.13	1.13	1.13	1.13	0.19	0.00	0.11
168	7	0.020	-1.749	0.136	-0.743	0.337	16.009	1.13	1.13	1.13	1.13	0.15	0.00	0.13
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
169	1A	-0.011	-1.109	-0.040	0.108	4.026	17.147	1.13	1.13	1.13	1.13	0.10	0.00	0.14
169	1B	-0.039	-1.109	-0.085	0.108	4.026	17.147	1.13	1.13	1.13	1.13	0.10	0.00	0.14
169	1C	-0.011	-0.725	-0.040	0.275	3.704	14.741	1.13	1.13	1.13	1.13	0.07	0.00	0.12
169	1D	-0.039	-0.725	-0.085	0.275	3.704	14.741	1.13	1.13	1.13	1.13	0.07	0.00	0.12
169	1I	-0.009	-1.116	-0.039	0.082	4.360	17.956	1.13	1.13	1.13	1.13	0.10	0.00	0.15
169	1J	-0.042	-1.116	-0.086	0.082	4.360	17.956	1.13	1.13	1.13	1.13	0.10	0.00	0.14
169	1K	-0.009	-0.718	-0.039	0.301	3.460	14.663	1.13	1.13	1.13	1.13	0.07	0.00	0.12
169	1L	-0.042	-0.718	-0.086	0.301	3.460	14.663	1.13	1.13	1.13	1.13	0.06	0.00	0.12
169	2	-0.048	-1.814	-0.135	-0.535	7.530	31.500	1.13	1.13	1.13	1.13	0.16	0.00	0.26
169	7	-0.035	-1.568	-0.119	0.371	6.098	27.593	1.13	1.13	1.13	1.13	0.14	0.00	0.23
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayyup= --	(e arm. base nelle due direz.)					
170	1A	-0.019	-0.319	-0.021	0.590	11.105	10.242	1.13	1.13	1.13	1.13	0.05	0.00	0.09
170	1B	-0.030	-0.319	-0.064	0.590	11.105	10.242	1.13	1.13	1.13	1.13	0.05	0.00	0.09
170	1C	-0.019	-0.184	-0.021	0.865	9.900	10.099	1.13	1.13	1.13	1.13	0.08	0.00	0.08
170	1D	-0.030	-0.184	-0.064	0.865	9.900	10.099	1.13	1.13	1.13	1.13	0.08	0.00	0.08
170	1I	-0.018	-0.326	-0.021	0.616	10.929	10.550	1.13	1.13	1.13	1.13	0.06	0.00	0.09
170	1J	-0.031	-0.326	-0.065	0.616	10.929	10.550	1.13	1.13	1.13	1.13	0.06	0.00	0.09
170	1K	-0.018	-0.177	-0.021	0.838	9.955	9.638	1.13	1.13	1.13	1.13	0.08	0.00	0.08
170	1L	-0.031	-0.177	-0.065	0.838	9.955	9.638	1.13	1.13	1.13	1.13	0.08	0.00	0.08
170	2	-0.046	-0.474	-0.098	1.266	19.881	18.335	1.13	1.13	1.				

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayyup = --	(e arm. base nelle due direz.)								
171	1A	-0.011	-0.655	-0.016	0.865	3.969	7.188	1.13	1.13	1.13	1.13	0.08	0.00	0.06
171	1B	-0.026	-0.655	-0.065	0.865	3.969	7.188	1.13	1.13	1.13	1.13	0.08	0.00	0.06
171	1C	-0.011	-0.433	-0.016	1.091	3.712	6.397	1.13	1.13	1.13	1.13	0.10	0.00	0.05
171	1D	-0.026	-0.433	-0.065	1.091	3.712	6.397	1.13	1.13	1.13	1.13	0.10	0.00	0.05
171	1I	-0.010	-0.655	-0.016	0.877	3.969	7.813	1.13	1.13	1.13	1.13	0.08	0.00	0.07
171	1J	-0.028	-0.655	-0.066	0.877	3.969	7.813	1.13	1.13	1.13	1.13	0.08	0.00	0.07
171	1K	-0.010	-0.433	-0.016	1.079	3.771	6.271	1.13	1.13	1.13	1.13	0.10	0.00	0.05
171	1L	-0.028	-0.433	-0.066	1.079	3.771	6.271	1.13	1.13	1.13	1.13	0.10	0.00	0.05
171	2	-0.036	-1.067	-0.098	1.756	8.700	11.558	1.13	1.13	1.13	1.13	0.15	0.00	0.10
171	7	-0.024	-0.921	-0.085	1.617	7.343	9.615	1.13	1.13	1.13	1.13	0.14	0.00	0.08
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayyup = --	(e arm. base nelle due direz.)								
172	1A	0.037	-0.572	0.046	1.230	4.417	5.350	1.13	1.13	1.13	1.13	0.11	0.00	0.04
172	1B	-0.004	-0.572	0.011	1.230	4.417	5.350	1.13	1.13	1.13	1.13	0.11	0.00	0.04
172	1C	0.037	-0.250	0.046	1.407	3.540	5.539	1.13	1.13	1.13	1.13	0.13	0.00	0.05
172	1D	-0.004	-0.250	0.011	1.407	3.540	5.539	1.13	1.13	1.13	1.13	0.13	0.00	0.05
172	1I	0.035	-0.561	0.047	1.250	4.409	5.391	1.13	1.13	1.13	1.13	0.11	0.00	0.05
172	1J	-0.002	-0.561	0.010	1.250	4.409	5.391	1.13	1.13	1.13	1.13	0.11	0.00	0.05
172	1K	0.035	-0.261	0.047	1.387	3.796	5.480	1.13	1.13	1.13	1.13	0.13	0.00	0.05
172	1L	-0.002	-0.261	0.010	1.387	3.796	5.480	1.13	1.13	1.13	1.13	0.13	0.00	0.05
172	2	-0.026	-0.779	-0.026	2.409	6.308	8.882	1.13	1.13	1.13	1.13	0.21	0.00	0.07
172	7	-0.014	-0.676	-0.021	2.132	4.342	7.911	1.13	1.13	1.13	1.13	0.19	0.00	0.07
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayyup = --	(e arm. base nelle due direz.)								
173	1A	0.027	0.144	-0.027	0.187	2.673	0.193	1.13	1.13	1.13	1.13	0.02	0.00	0.02
173	1B	-0.009	0.144	-0.072	0.187	2.673	0.193	1.13	1.13	1.13	1.13	0.02	0.00	0.02
173	1C	0.027	0.298	-0.027	0.264	3.233	1.417	1.13	1.13	1.13	1.13	0.03	0.00	0.03
173	1D	-0.009	0.298	-0.072	0.264	3.233	1.417	1.13	1.13	1.13	1.13	0.03	0.00	0.03
173	1I	0.030	0.122	-0.026	0.185	2.280	0.208	1.13	1.13	1.13	1.13	0.02	0.00	0.02
173	1J	-0.012	0.122	-0.073	0.185	2.280	0.208	1.13	1.13	1.13	1.13	0.02	0.00	0.02
173	1K	0.030	0.320	-0.026	0.266	2.966	1.747	1.13	1.13	1.13	1.13	0.03	0.00	0.02
173	1L	-0.012	0.320	-0.073	0.266	2.966	1.747	1.13	1.13	1.13	1.13	0.03	0.00	0.02
173	2	-0.015	0.368	-0.109	0.263	5.837	4.417	1.13	1.13	1.13	1.13	0.03	0.00	0.05
173	7	-0.039	0.259	-0.097	0.339	3.438	1.338	1.13	1.13	1.13	1.13	0.03	0.00	0.03
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayyup = --	(e arm. base nelle due direz.)								
174	1A	0.034	-0.404	0.060	1.109	0.581	3.997	1.13	1.13	1.13	1.13	0.10	0.00	0.03
174	1B	0.011	-0.404	0.016	1.109	0.581	3.997	1.13	1.13	1.13	1.13	0.10	0.00	0.03
174	1C	0.034	-0.163	0.060	1.400	1.661	4.517	1.13	1.13	1.13	1.13	0.13	0.00	0.04
174	1D	0.011	-0.163	0.016	1.400	1.661	4.517	1.13	1.13	1.13	1.13	0.13	0.00	0.04
174	1I	0.035	-0.393	0.058	1.150	0.606	4.192	1.13	1.13	1.13	1.13	0.10	0.00	0.04
174	1J	0.010	-0.393	0.019	1.150	0.606	4.192	1.13	1.13	1.13	1.13	0.10	0.00	0.04
174	1K	0.035	-0.174	0.058	1.360	1.586	4.371	1.13	1.13	1.13	1.13	0.12	0.00	0.04
174	1L	0.010	-0.174	0.019	1.360	1.586	4.371	1.13	1.13	1.13	1.13	0.12	0.00	0.04
174	2	0.036	-0.530	0.045	2.289	1.206	8.333	1.13	1.13	1.13	1.13	0.20	0.00	0.07
174	7	0.021	-0.467	0.030	2.118	0.463	7.408	1.13	1.13	1.13	1.13	0.19	0.00	0.06
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayyup = --	(e arm. base nelle due direz.)								
175	1A	0.027	-0.392	0.088	1.101	2.550	6.239	1.13	1.13	1.13	1.13	0.10	0.00	0.05
175	1B	0.017	-0.392	0.035	1.101	2.550	6.239	1.13	1.13	1.13	1.13	0.10	0.00	0.05
175	1C	0.027	-0.329	0.088	1.500	5.449	5.780	1.13	1.13	1.13	1.13	0.14	0.00	0.05
175	1D	0.017	-0.329	0.035	1.500	5.449	5.780	1.13	1.13	1.13	1.13	0.14	0.00	0.05
175	1I	0.028	-0.389	0.085	1.136	2.923	6.244	1.13	1.13	1.13	1.13	0.10	0.00	0.05
175	1J	0.016	-0.389	0.037	1.136	2.923	6.244	1.13	1.13	1.13	1.13	0.10	0.00	0.05
175	1K	0.028	-0.332	0.085	1.465	5.315	5.753	1.13	1.13	1.13	1.13	0.13	0.00	0.05
175	1L	0.016	-0.332	0.037	1.465	5.315	5.753	1.13	1.13	1.13	1.13	0.13	0.00	0.05
175	2	0.035	-0.665	0.085	2.368	8.898	10.951	1.13	1.13	1.13	1.13	0.21	0.00	0.09
175	7	0.020	-0.565	0.061	2.119	8.607	8.282	1.13	1.13	1.13	1.13	0.19	0.00	0.07
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayyup = --	(e arm. base nelle due direz.)								
176	1A	0.033	-0.479	-0.011	-0.304	6.161	4.714	1.13	1.13	1.13	1.13	0.04	0.00	0.05
176	1B	0.028	-0.479	-0.052	-0.304	6.161	4.714	1.13	1.13	1.13	1.13	0.04	0.00	0.05
176	1C	0.033	-0.371	-0.011	-0.150	4.749	3.634	1.13	1.13	1.13	1.13	0.03	0.00	0.04
176	1D	0.028	-0.371	-0.052	-0.150	4.749	3.634	1.13	1.13	1.13	1.13	0.03	0.00	0.04
176	1I	0.035	-0.474	-0.005	-0.300	6.085	4.776	1.13	1.13	1.13	1.13	0.04	0.00	0.05
176	1J	0.026	-0.474	-0.058	-0.300	6.085	4.776	1.13	1.13	1.13	1.13	0.04	0.00	0.05
176	1K	0.035	-0.376	-0.005	-0.154	5.467	3.692	1.13	1.13	1.13	1.13	0.03	0.00	0.05
176	1L	0.026	-0.376	-0.058	-0.154	5.467	3.692	1.13	1.13	1.13	1.13	0.03	0.00	0.05
176	2	0.054	-0.813	-0.062	-0.459	10.058	8.022	1.13	1.13	1.13	1.13	0.07	0.00	0.08
176	7	0.036	-0.695	-0.059	-0.375	9.030	6.919	1.13	1.13	1.13	1.13	0.06	0.00	0.08
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayyup = --	(e arm. base nelle due direz.)								
177	1A	-0.016	-1.621	0.047	-1.679	6.662	10.316	1.13	1.13	1.13	1.13	0.15	0.00	0.09
177	1B	-0.064	-1.621	0.011	-1.679	6.662	10.316	1.13	1.13	1.13	1.13	0.15	0.00	0.09
177	1C	-0.016	-1.167	0.047	-0.932	7.973	3.316	1.13	1.13	1.13	1.13	0.11	0.00	0.07
177	1D	-0.064	-1.167	0.011	-0.932	7.973	3.316	1.13	1.13	1.13	1.13	0.11	0.00	0.07
177	1I	-0.010	-1.695	0.050	-1.716	6.241	12.630	1.13	1.13	1.13	1.13	0.16	0.00	0.11
177	1J	-0.070	-1.695	0.007	-1.716	6.241	12.630	1.13	1.13	1.13	1.13	0.16	0.00	0.11
177	1K	-0.010	-1.093	0.050	-0.896	7.281	2.453	1.13	1.13	1.13	1.13	0.10	0.00	0.06
177	1L	-0.070	-1.093	0.007	-0.896	7.281	2.453	1.13	1.13	1.13	1.13	0.10	0.00	0.06
177	2	-0.080	-2.838	0.050	-2.576	16.332	6.822	1.13	1.13	1.13	1.13	0.25	0.00	0.14
177	7	-0.076	-2.460	0.031	-2.232	12.349	9.233	1.13	1.13	1.13	1.13	0.21	0.00	0.10
Spess. =	30.0 cm	Axxinf = --	Axxsup = --	Ayyinf = --	Ayyup = --	(e arm. base nelle due direz.)								
178	1A	0.030	-0.803	0.042	-0.198	6.156	4.399	1.13	1.13	1.13	1.13	0.07	0.00	0.05
178	1B	0.012	-0.803	0.002	-0.198	6.156	4.399	1.13	1.13	1.13	1.13	0.07	0.00	0.05
178	1C	0.030	-0.563	0.042	-0.086	4.124	2.564	1.13	1.13	1.13	1.13	0.05	0.00	0.03
178	1D	0.012	-0.563	0.002	-0.086	4.124	2.564	1.13	1.13	1.13	1.13	0.05	0.00	0.03
178</														



**Relazione di calcolo delle opere strutturali****Riquilificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10**

Spess. =	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --	(e arm. base nelle due direz.)							
179 1A	0.116	-1.171	0.015	-1.377	15.189	1.782	1.13	1.13	1.13	1.13	0.13	0.00	0.13
179 1B	0.026	-1.171	-0.033	-1.377	15.189	1.782	1.13	1.13	1.13	1.13	0.12	0.00	0.13
179 1C	0.116	-0.709	0.015	-0.488	8.581	0.561	1.13	1.13	1.13	1.13	0.07	0.00	0.07
179 1D	0.026	-0.709	-0.033	-0.488	8.581	0.561	1.13	1.13	1.13	1.13	0.06	0.00	0.07
179 1I	0.106	-1.134	0.008	-1.545	16.064	0.267	1.13	1.13	1.13	1.13	0.14	0.00	0.13
179 1J	0.037	-1.134	-0.026	-1.545	16.064	0.267	1.13	1.13	1.13	1.13	0.14	0.00	0.13
179 1K	0.106	-0.746	0.008	-0.320	6.258	1.623	1.13	1.13	1.13	1.13	0.07	0.00	0.05
179 1L	0.037	-0.746	-0.026	-0.320	6.258	1.623	1.13	1.13	1.13	1.13	0.07	0.00	0.05
179 2	0.105	-1.608	-0.024	-1.609	26.772	2.490	1.13	1.13	1.13	1.13	0.14	0.00	0.22
179 7	0.049	-1.080	0.011	-0.682	16.657	6.485	1.13	1.13	1.13	1.13	0.09	0.00	0.14
Spess. =	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --	(e arm. base nelle due direz.)							
180 1A	0.074	-0.564	0.121	-0.724	11.418	7.253	1.13	1.13	1.13	1.13	0.07	0.00	0.10
180 1B	0.036	-0.564	0.017	-0.724	11.418	7.253	1.13	1.13	1.13	1.13	0.07	0.00	0.10
180 1C	0.074	-0.181	0.121	-0.322	11.567	2.244	1.13	1.13	1.13	1.13	0.03	0.00	0.10
180 1D	0.036	-0.181	0.017	-0.322	11.567	2.244	1.13	1.13	1.13	1.13	0.03	0.00	0.10
180 1I	0.073	-0.652	0.107	-0.753	11.449	9.732	1.13	1.13	1.13	1.13	0.07	0.00	0.10
180 1J	0.037	-0.652	0.031	-0.753	11.449	9.732	1.13	1.13	1.13	1.13	0.07	0.00	0.10
180 1K	0.073	-0.093	0.107	-0.294	13.122	0.552	1.13	1.13	1.13	1.13	0.03	0.00	0.11
180 1L	0.037	-0.093	0.031	-0.294	13.122	0.552	1.13	1.13	1.13	1.13	0.03	0.00	0.11
180 2	0.087	-0.677	0.094	-0.911	18.507	5.378	1.13	1.13	1.13	1.13	0.08	0.00	0.15
180 7	0.030	-0.292	0.063	-0.959	12.986	0.424	1.13	1.13	1.13	1.13	0.08	0.00	0.11
Spess. =	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --	(e arm. base nelle due direz.)							
181 1A	0.052	-0.587	0.126	-0.429	7.561	7.586	1.13	1.13	1.13	1.13	0.05	0.00	0.06
181 1B	0.002	-0.587	0.037	-0.429	7.561	7.586	1.13	1.13	1.13	1.13	0.05	0.00	0.06
181 1C	0.052	-0.193	0.126	-0.230	5.876	3.883	1.13	1.13	1.13	1.13	0.02	0.00	0.05
181 1D	0.002	-0.193	0.037	-0.230	5.876	3.883	1.13	1.13	1.13	1.13	0.02	0.00	0.05
181 1I	0.050	-0.660	0.113	-0.419	7.588	7.813	1.13	1.13	1.13	1.13	0.06	0.00	0.07
181 1J	0.004	-0.660	0.050	-0.419	7.588	7.813	1.13	1.13	1.13	1.13	0.06	0.00	0.07
181 1K	0.050	-0.119	0.113	-0.240	5.893	3.525	1.13	1.13	1.13	1.13	0.02	0.00	0.05
181 1L	0.004	-0.119	0.050	-0.240	5.893	3.525	1.13	1.13	1.13	1.13	0.02	0.00	0.05
181 2	0.043	-0.689	0.116	-0.580	11.202	9.595	1.13	1.13	1.13	1.13	0.06	0.00	0.09
181 7	0.013	-0.256	0.058	-0.515	5.938	7.532	1.13	1.13	1.13	1.13	0.05	0.00	0.06
Spess. =	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --	(e arm. base nelle due direz.)							
182 1A	0.036	-1.699	0.176	-1.013	8.692	19.292	1.13	1.13	1.13	1.13	0.15	0.00	0.16
182 1B	-0.003	-1.699	0.074	-1.013	8.692	19.292	1.13	1.13	1.13	1.13	0.15	0.00	0.16
182 1C	0.036	-0.569	0.176	0.197	5.207	16.346	1.13	1.13	1.13	1.13	0.05	0.00	0.14
182 1D	-0.003	-0.569	0.074	0.197	5.207	16.346	1.13	1.13	1.13	1.13	0.05	0.00	0.14
182 1I	0.032	-1.795	0.165	-0.997	5.275	20.664	1.13	1.13	1.13	1.13	0.16	0.00	0.17
182 1J	0.001	-1.795	0.085	-0.997	5.275	20.664	1.13	1.13	1.13	1.13	0.16	0.00	0.17
182 1K	0.032	-0.474	0.165	0.181	7.598	18.294	1.13	1.13	1.13	1.13	0.04	0.00	0.15
182 1L	0.001	-0.474	0.085	0.181	7.598	18.294	1.13	1.13	1.13	1.13	0.04	0.00	0.15
182 2	0.020	-2.025	0.195	-0.813	14.986	36.154	1.13	1.13	1.13	1.13	0.18	0.00	0.30
182 7	0.043	-1.313	0.136	-1.118	17.195	29.842	1.13	1.13	1.13	1.13	0.12	0.00	0.25
Spess. =	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --	(e arm. base nelle due direz.)							
183 1A	0.038	-0.944	0.170	-1.486	16.083	11.965	1.13	1.13	1.13	1.13	0.14	0.00	0.13
183 1B	0.023	-0.944	0.068	-1.486	16.083	11.965	1.13	1.13	1.13	1.13	0.14	0.00	0.13
183 1C	0.038	-0.345	0.170	-0.243	12.540	11.749	1.13	1.13	1.13	1.13	0.03	0.00	0.10
183 1D	0.023	-0.345	0.068	-0.243	12.540	11.749	1.13	1.13	1.13	1.13	0.03	0.00	0.10
183 1I	0.036	-1.231	0.157	-1.568	16.987	12.259	1.13	1.13	1.13	1.13	0.14	0.00	0.14
183 1J	0.026	-1.231	0.082	-1.568	16.987	12.259	1.13	1.13	1.13	1.13	0.14	0.00	0.14
183 1K	0.036	-0.058	0.157	-0.161	13.971	9.222	1.13	1.13	1.13	1.13	0.02	0.00	0.12
183 1L	0.026	-0.058	0.082	-0.161	13.971	9.222	1.13	1.13	1.13	1.13	0.02	0.00	0.12
183 2	0.050	-1.091	0.184	-1.645	27.245	20.513	1.13	1.13	1.13	1.13	0.15	0.00	0.23
183 7	0.024	-0.297	0.128	-1.493	27.301	5.884	1.13	1.13	1.13	1.13	0.13	0.00	0.23
Spess. =	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --	(e arm. base nelle due direz.)							
184 1A	-0.005	-0.406	0.002	-0.401	7.355	6.857	1.13	1.13	1.13	1.13	0.04	0.00	0.06
184 1B	-0.018	-0.406	-0.041	-0.401	7.355	6.857	1.13	1.13	1.13	1.13	0.04	0.00	0.06
184 1C	-0.005	-0.147	0.002	-0.203	4.639	3.452	1.13	1.13	1.13	1.13	0.02	0.00	0.04
184 1D	-0.018	-0.147	-0.041	-0.203	4.639	3.452	1.13	1.13	1.13	1.13	0.02	0.00	0.04
184 1I	-0.002	-0.413	0.006	-0.399	7.388	6.982	1.13	1.13	1.13	1.13	0.04	0.00	0.06
184 1J	-0.021	-0.413	-0.045	-0.399	7.388	6.982	1.13	1.13	1.13	1.13	0.04	0.00	0.06
184 1K	-0.002	-0.139	0.006	-0.205	4.638	3.251	1.13	1.13	1.13	1.13	0.02	0.00	0.04
184 1L	-0.021	-0.139	-0.045	-0.205	4.638	3.251	1.13	1.13	1.13	1.13	0.02	0.00	0.04
184 2	-0.020	-0.553	-0.041	-0.621	11.973	10.914	1.13	1.13	1.13	1.13	0.05	0.00	0.10
184 7	-0.012	-0.500	-0.047	-0.587	11.042	9.731	1.13	1.13	1.13	1.13	0.05	0.00	0.09
Spess. =	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --	(e arm. base nelle due direz.)							
185 1A	-0.016	-0.673	0.040	-1.187	1.082	7.797	1.13	1.13	1.13	1.13	0.11	0.00	0.07
185 1B	-0.030	-0.673	-0.007	-1.187	1.082	7.797	1.13	1.13	1.13	1.13	0.11	0.00	0.07
185 1C	-0.016	-0.245	0.040	-0.557	1.911	5.822	1.13	1.13	1.13	1.13	0.05	0.00	0.05
185 1D	-0.030	-0.245	-0.007	-0.557	1.911	5.822	1.13	1.13	1.13	1.13	0.05	0.00	0.05
185 1I	-0.012	-0.690	0.044	-1.248	0.668	7.561	1.13	1.13	1.13	1.13	0.11	0.00	0.06
185 1J	-0.033	-0.690	-0.012	-1.248	0.668	7.561	1.13	1.13	1.13	1.13	0.11	0.00	0.06
185 1K	-0.012	-0.229	0.044	-0.496	2.386	5.864	1.13	1.13	1.13	1.13	0.05	0.00	0.05
185 1L	-0.033	-0.229	-0.012	-0.496	2.386	5.864	1.13	1.13	1.13	1.13	0.05	0.00	0.05
185 2	-0.045	-0.928	0.025	-1.741	3.104	13.142	1.13	1.13	1.13	1.13	0.15	0.00	0.11
185 7	-0.046	-0.900	0.009	-1.557	3.952	12.226	1.13	1.13	1.13	1.13	0.14	0.00	0.10
Spess. =	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --	(e arm. base nelle due direz.)							
186 1A	0.003	-0.358	-0.003	-0.734	8.091	1.493	1.13	1.13	1.13	1.13	0.07	0.00	0.07
186 1B	-0.024	-0.358	-0.047	-0.734	8.091	1.493	1.13	1.13	1.13	1.13	0.07	0.00	0.07
186 1C	0.003	-0.113	-0.003	-0.341	6.014	0.880	1.13	1.13	1.13	1.13	0.03	0.00	0.05
186 1D	-0.024	-0.113	-0.047	-0.341	6.014	0.880	1.13	1.13	1.13	1.13	0.03	0.00	0.05
186 1I	0.009	-0.376	-0.002	-0.742	8.206	1.383	1.13	1.13	1.13	1.13	0.07	0.00	0.07
186 1J	-0.030	-0.376	-0.048	-0.742	8.206	1.383	1.13	1.13	1.13	1.13	0.07	0.00	0.07
186 1K	0.009	-0.094	-0.002	-0.333	5.878	0.787	1.13	1.13	1.13	1.13	0.03	0.00	0.05
186 1L	-0.030	-0.094	-0.048	-0.333	5.878	0.787	1.13	1.13	1.13	1.13	0.03	0.00	0.05
186 2	-0.018	-0.479	-0.052	-1.125	12.790	2.716	1.13	1.13	1.13	1.13	0.10	0.00	0.11
186 7	-0.012	-0.420	-0.056	-1.012	11.637	1.838	1.13	1.13	1.13	1.13	0.09	0.00	0.10
Spess. =	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --	(e arm. base nelle due direz.)							

# Relazione di calcolo delle opere strutturali

## Riquilificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

187	1A	0.027	-0.381	0.108	-0.453	5.724	5.779	1.13	1.13	1.13	1.13	0.04	0.00	0.05
187	1B	0.012	-0.381	0.014	-0.453	5.724	5.779	1.13	1.13	1.13	1.13	0.04	0.00	0.05
187	1C	0.027	-0.225	0.108	-0.195	3.233	4.287	1.13	1.13	1.13	1.13	0.02	0.00	0.04
187	1D	0.012	-0.225	0.014	-0.195	3.233	4.287	1.13	1.13	1.13	1.13	0.02	0.00	0.04
187	1I	0.025	-0.424	0.098	-0.533	6.340	6.228	1.13	1.13	1.13	1.13	0.05	0.00	0.05
187	1J	0.014	-0.424	0.024	-0.533	6.340	6.228	1.13	1.13	1.13	1.13	0.05	0.00	0.05
187	1K	0.025	-0.182	0.098	-0.115	2.755	4.130	1.13	1.13	1.13	1.13	0.02	0.00	0.03
187	1L	0.014	-0.182	0.024	-0.115	2.755	4.130	1.13	1.13	1.13	1.13	0.02	0.00	0.03
187	2	0.028	-0.529	0.080	-0.553	7.709	8.151	1.13	1.13	1.13	1.13	0.05	0.00	0.07
187	7	0.005	-0.298	0.044	-0.344	4.479	6.220	1.13	1.13	1.13	1.13	0.03	0.00	0.05
Spess.= 30.0 cm    Axxinf= --                  Axxsup= --                  Ayyinf= --                  Ayyup= --                  (e arm. base nelle due direz.)														
188	1A	0.028	-0.860	0.107	-0.367	8.554	7.259	1.13	1.13	1.13	1.13	0.08	0.00	0.07
188	1B	-0.001	-0.860	0.015	-0.367	8.554	7.259	1.13	1.13	1.13	1.13	0.08	0.00	0.07
188	1C	0.028	-0.445	0.107	-0.151	3.708	3.720	1.13	1.13	1.13	1.13	0.04	0.00	0.03
188	1D	-0.001	-0.445	0.015	-0.151	3.708	3.720	1.13	1.13	1.13	1.13	0.04	0.00	0.03
188	1I	0.025	-0.961	0.098	-0.426	9.121	7.896	1.13	1.13	1.13	1.13	0.09	0.00	0.08
188	1J	0.003	-0.961	0.025	-0.426	9.121	7.896	1.13	1.13	1.13	1.13	0.09	0.00	0.08
188	1K	0.025	-0.344	0.098	-0.092	2.688	3.464	1.13	1.13	1.13	1.13	0.03	0.00	0.03
188	1L	0.003	-0.344	0.025	-0.092	2.688	3.464	1.13	1.13	1.13	1.13	0.03	0.00	0.03
188	2	0.020	-1.119	0.080	-0.432	11.054	8.791	1.13	1.13	1.13	1.13	0.10	0.00	0.09
188	7	0.008	-0.641	0.041	-0.262	6.419	6.877	1.13	1.13	1.13	1.13	0.06	0.00	0.06
Spess.= 30.0 cm    Axxinf= --                  Axxsup= --                  Ayyinf= --                  Ayyup= --                  (e arm. base nelle due direz.)														
189	1A	0.095	-0.866	0.130	-0.022	3.460	7.938	1.13	1.13	1.13	1.13	0.08	0.00	0.07
189	1B	0.050	-0.866	0.045	-0.022	3.460	7.938	1.13	1.13	1.13	1.13	0.08	0.00	0.07
189	1C	0.095	-0.534	0.130	0.589	0.277	6.457	1.13	1.13	1.13	1.13	0.05	0.00	0.05
189	1D	0.050	-0.534	0.045	0.589	0.277	6.457	1.13	1.13	1.13	1.13	0.05	0.00	0.05
189	1I	0.090	-0.861	0.124	0.041	3.216	8.419	1.13	1.13	1.13	1.13	0.08	0.00	0.07
189	1J	0.055	-0.861	0.051	0.041	3.216	8.419	1.13	1.13	1.13	1.13	0.08	0.00	0.07
189	1K	0.090	-0.538	0.124	0.527	0.056	7.170	1.13	1.13	1.13	1.13	0.05	0.00	0.06
189	1L	0.055	-0.538	0.051	0.527	0.056	7.170	1.13	1.13	1.13	1.13	0.05	0.00	0.06
189	2	0.111	-1.268	0.134	0.434	3.944	17.583	1.13	1.13	1.13	1.13	0.11	0.00	0.15
189	7	0.058	-1.179	0.113	0.427	2.625	12.982	1.13	1.13	1.13	1.13	0.10	0.00	0.11
Spess.= 30.0 cm    Axxinf= --                  Axxsup= --                  Ayyinf= --                  Ayyup= --                  (e arm. base nelle due direz.)														
190	1A	0.057	0.601	0.125	0.159	6.512	0.739	1.13	1.13	1.13	1.13	0.06	0.00	0.05
190	1B	0.025	0.601	0.066	0.159	6.512	0.739	1.13	1.13	1.13	1.13	0.05	0.00	0.05
190	1C	0.057	0.838	0.125	0.694	6.593	2.206	1.13	1.13	1.13	1.13	0.08	0.00	0.06
190	1D	0.025	0.838	0.066	0.694	6.593	2.206	1.13	1.13	1.13	1.13	0.08	0.00	0.06
190	1I	0.056	0.612	0.120	0.212	6.512	0.524	1.13	1.13	1.13	1.13	0.06	0.00	0.05
190	1J	0.026	0.612	0.072	0.212	6.512	0.524	1.13	1.13	1.13	1.13	0.06	0.00	0.05
190	1K	0.056	0.827	0.120	0.642	6.730	1.945	1.13	1.13	1.13	1.13	0.08	0.00	0.06
190	1L	0.026	0.827	0.072	0.642	6.730	1.945	1.13	1.13	1.13	1.13	0.08	0.00	0.06
190	2	0.058	1.294	0.150	0.726	12.405	0.107	1.13	1.13	1.13	1.13	0.11	0.00	0.10
190	7	0.068	1.260	0.100	-0.527	11.897	4.454	1.13	1.13	1.13	1.13	0.11	0.00	0.10
Spess.= 30.0 cm    Axxinf= --                  Axxsup= --                  Ayyinf= --                  Ayyup= --                  (e arm. base nelle due direz.)														
191	1A	0.040	-0.367	0.123	0.792	6.653	0.417	1.13	1.13	1.13	1.13	0.07	0.00	0.06
191	1B	0.014	-0.367	0.069	0.792	6.653	0.417	1.13	1.13	1.13	1.13	0.07	0.00	0.06
191	1C	0.040	-0.060	0.123	1.237	8.068	0.500	1.13	1.13	1.13	1.13	0.11	0.00	0.07
191	1D	0.014	-0.060	0.069	1.237	8.068	0.500	1.13	1.13	1.13	1.13	0.11	0.00	0.07
191	1I	0.038	-0.346	0.118	0.857	6.827	0.048	1.13	1.13	1.13	1.13	0.08	0.00	0.06
191	1J	0.016	-0.346	0.074	0.857	6.827	0.048	1.13	1.13	1.13	1.13	0.08	0.00	0.06
191	1K	0.038	-0.081	0.118	1.172	7.963	0.578	1.13	1.13	1.13	1.13	0.11	0.00	0.07
191	1L	0.016	-0.081	0.074	1.172	7.963	0.578	1.13	1.13	1.13	1.13	0.11	0.00	0.07
191	2	0.045	-0.384	0.148	1.815	12.377	1.738	1.13	1.13	1.13	1.13	0.16	0.00	0.10
191	7	0.027	-0.337	0.119	1.669	7.906	4.719	1.13	1.13	1.13	1.13	0.15	0.00	0.07
Spess.= 30.0 cm    Axxinf= --                  Axxsup= --                  Ayyinf= --                  Ayyup= --                  (e arm. base nelle due direz.)														
192	1A	0.033	-0.571	0.147	0.400	7.914	3.561	1.13	1.13	1.13	1.13	0.05	0.00	0.07
192	1B	0.021	-0.571	0.077	0.400	7.914	3.561	1.13	1.13	1.13	1.13	0.05	0.00	0.07
192	1C	0.033	-0.451	0.147	1.028	7.163	0.102	1.13	1.13	1.13	1.13	0.09	0.00	0.06
192	1D	0.021	-0.451	0.077	1.028	7.163	0.102	1.13	1.13	1.13	1.13	0.09	0.00	0.06
192	1I	0.032	-0.588	0.141	0.453	7.869	4.103	1.13	1.13	1.13	1.13	0.05	0.00	0.07
192	1J	0.021	-0.588	0.084	0.453	7.869	4.103	1.13	1.13	1.13	1.13	0.05	0.00	0.07
192	1K	0.032	-0.434	0.141	0.975	7.375	0.461	1.13	1.13	1.13	1.13	0.09	0.00	0.06
192	1L	0.021	-0.434	0.084	0.975	7.375	0.461	1.13	1.13	1.13	1.13	0.09	0.00	0.06
192	2	0.044	-0.919	0.176	1.238	12.865	8.632	1.13	1.13	1.13	1.13	0.11	0.00	0.11
192	7	0.024	-0.722	0.133	1.046	10.811	11.593	1.13	1.13	1.13	1.13	0.09	0.00	0.10
Spess.= 30.0 cm    Axxinf= --                  Axxsup= --                  Ayyinf= --                  Ayyup= --                  (e arm. base nelle due direz.)														
193	1A	0.024	-0.266	0.125	0.544	5.997	16.458	1.13	1.13	1.13	1.13	0.05	0.00	0.14
193	1B	0.010	-0.266	0.053	0.544	5.997	16.458	1.13	1.13	1.13	1.13	0.05	0.00	0.14
193	1C	0.024	-0.152	0.125	1.058	6.191	16.201	1.13	1.13	1.13	1.13	0.10	0.00	0.14
193	1D	0.010	-0.152	0.053	1.058	6.191	16.201	1.13	1.13	1.13	1.13	0.10	0.00	0.14
193	1I	0.024	-0.269	0.122	0.585	6.316	16.432	1.13	1.13	1.13	1.13	0.05	0.00	0.14
193	1J	0.010	-0.269	0.057	0.585	6.316	16.432	1.13	1.13	1.13	1.13	0.05	0.00	0.14
193	1K	0.024	-0.149	0.122	1.016	6.148	15.877	1.13	1.13	1.13	1.13	0.09	0.00	0.13
193	1L	0.010	-0.149	0.057	1.016	6.148	15.877	1.13	1.13	1.13	1.13	0.09	0.00	0.13
193	2	0.026	-0.375	0.133	1.409	12.267	28.085	1.13	1.13	1.13	1.13	0.12	0.00	0.23
193	7	0.011	-0.327	0.086	1.125	13.486	22.296	1.13	1.13	1.13	1.13	0.10	0.00	0.19
Spess.= 30.0 cm    Axxinf= --                  Axxsup= --                  Ayyinf= --                  Ayyup= --                  (e arm. base nelle due direz.)														
194	1A	0.026	-0.436	0.115	0.946	10.655	1.380	1.13	1.13	1.13	1.13	0.09	0.00	0.09
194	1B	0.013	-0.436	0.051	0.946	10.655	1.380	1.13	1.13	1.13	1.13	0.09	0.00	0.09
194	1C	0.026	-0.375	0.115	1.384	9.995	0.093	1.13	1.13	1.13	1.13	0.13	0.00	0.08
194	1D	0.013	-0.375	0.051	1.384	9.995	0.093	1.13	1.13	1.13	1.13	0.13	0.00	0.08
194	1I	0.026	-0.449	0.112	0.982	10.582	0.774	1.13	1.13	1.13	1.13	0.09	0.00	0.09
194	1J	0.013	-0.449	0.054	0.982	10.582	0.774	1.13	1.13	1.13	1.13	0.09	0.00	0.09
194	1K	0.026	-0.361	0.112	1.347	10.122	0.289	1.13	1.13	1.13	1.13	0.12	0.00	0.08
194	1L	0.013	-0.361	0.054	1.347	10.122	0.289	1.13	1.13	1.13	1.13	0.12	0.00	0.08
194	2	0.030	-0.742	0.123	2.099	18.831	1.960	1.13	1.13	1.13	1.13	0.18	0.00	0.16
194	7	0.014	-0.631	0.082	1.764	14.163	3.646	1.13	1.13	1.13	1.13	0.15	0.00	0.12
Spess.= 30.0 cm    Axxinf= --                  Axxsup= --                  Ayyinf= --                  Ayyup= --                  (e arm. base nelle due direz.)														

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

195 1A	0.059	0.688	0.121	0.095	10.880	11.269	1.13	1.13	1.13	1.13	0.06	0.00	0.09
195 1B	0.026	0.688	0.059	0.095	10.880	11.269	1.13	1.13	1.13	1.13	0.06	0.00	0.09
195 1C	0.059	0.907	0.121	0.614	10.581	11.921	1.13	1.13	1.13	1.13	0.08	0.00	0.10
195 1D	0.026	0.907	0.059	0.614	10.581	11.921	1.13	1.13	1.13	1.13	0.08	0.00	0.10
195 1I	0.058	0.700	0.116	0.136	10.708	11.245	1.13	1.13	1.13	1.13	0.06	0.00	0.09
195 1J	0.027	0.700	0.064	0.136	10.708	11.245	1.13	1.13	1.13	1.13	0.06	0.00	0.09
195 1K	0.058	0.895	0.116	0.572	10.616	11.678	1.13	1.13	1.13	1.13	0.08	0.00	0.10
195 1L	0.027	0.895	0.064	0.572	10.616	11.678	1.13	1.13	1.13	1.13	0.08	0.00	0.10
195 2	0.060	1.438	0.139	0.596	19.594	20.063	1.13	1.13	1.13	1.13	0.13	0.00	0.17
195 7	0.066	1.334	0.088	-0.624	17.781	15.107	1.13	1.13	1.13	1.13	0.12	0.00	0.15
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
196 1A	-0.015	0.752	0.022	-0.278	2.765	7.484	1.13	1.13	1.13	1.13	0.07	0.00	0.06
196 1B	-0.067	0.752	0.002	-0.278	2.765	7.484	1.13	1.13	1.13	1.13	0.07	0.00	0.06
196 1C	-0.015	0.918	0.022	-0.133	3.069	7.870	1.13	1.13	1.13	1.13	0.08	0.00	0.07
196 1D	-0.067	0.918	0.002	-0.133	3.069	7.870	1.13	1.13	1.13	1.13	0.08	0.00	0.07
196 1I	-0.014	0.757	0.025	-0.287	2.355	7.133	1.13	1.13	1.13	1.13	0.07	0.00	0.06
196 1J	-0.067	0.757	-0.000	-0.287	2.355	7.133	1.13	1.13	1.13	1.13	0.07	0.00	0.06
196 1K	-0.014	0.913	0.025	-0.124	3.194	7.721	1.13	1.13	1.13	1.13	0.08	0.00	0.06
196 1L	-0.067	0.913	-0.000	-0.124	3.194	7.721	1.13	1.13	1.13	1.13	0.08	0.00	0.06
196 2	-0.095	1.470	-0.015	-0.408	5.414	15.277	1.13	1.13	1.13	1.13	0.13	0.00	0.13
196 7	-0.083	1.264	-0.010	-0.311	4.072	14.600	1.13	1.13	1.13	1.13	0.11	0.00	0.12
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
197 1A	-0.042	-0.982	0.021	-1.126	7.427	6.534	1.13	1.13	1.13	1.13	0.10	0.00	0.06
197 1B	-0.070	-0.982	-0.039	-1.126	7.427	6.534	1.13	1.13	1.13	1.13	0.10	0.00	0.06
197 1C	-0.042	-0.658	0.021	-0.605	5.356	4.635	1.13	1.13	1.13	1.13	0.06	0.00	0.04
197 1D	-0.070	-0.658	-0.039	-0.605	5.356	4.635	1.13	1.13	1.13	1.13	0.06	0.00	0.04
197 1I	-0.037	-0.986	0.023	-1.170	8.062	7.187	1.13	1.13	1.13	1.13	0.11	0.00	0.07
197 1J	-0.076	-0.986	-0.041	-1.170	8.062	7.187	1.13	1.13	1.13	1.13	0.11	0.00	0.07
197 1K	-0.037	-0.654	0.023	-0.562	5.382	3.794	1.13	1.13	1.13	1.13	0.06	0.00	0.04
197 1L	-0.076	-0.654	-0.041	-0.562	5.382	3.794	1.13	1.13	1.13	1.13	0.06	0.00	0.04
197 2	-0.117	-1.834	-0.017	-1.753	11.963	8.597	1.13	1.13	1.13	1.13	0.16	0.00	0.10
197 7	-0.106	-1.359	-0.013	-1.443	10.446	7.132	1.13	1.13	1.13	1.13	0.13	0.00	0.09
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
198 1A	0.025	-0.807	-0.019	-1.133	9.891	2.573	1.13	1.13	1.13	1.13	0.10	0.00	0.08
198 1B	-0.006	-0.807	-0.072	-1.133	9.891	2.573	1.13	1.13	1.13	1.13	0.10	0.00	0.08
198 1C	0.025	-0.392	-0.019	-0.608	8.218	2.533	1.13	1.13	1.13	1.13	0.05	0.00	0.07
198 1D	-0.006	-0.392	-0.072	-0.608	8.218	2.533	1.13	1.13	1.13	1.13	0.05	0.00	0.07
198 1I	0.024	-0.861	-0.013	-1.182	10.064	3.007	1.13	1.13	1.13	1.13	0.11	0.00	0.08
198 1J	-0.005	-0.861	-0.077	-1.182	10.064	3.007	1.13	1.13	1.13	1.13	0.11	0.00	0.08
198 1K	0.024	-0.339	-0.013	-0.558	7.978	2.077	1.13	1.13	1.13	1.13	0.05	0.00	0.07
198 1L	-0.005	-0.339	-0.077	-0.558	7.978	2.077	1.13	1.13	1.13	1.13	0.05	0.00	0.07
198 2	-0.020	-1.319	-0.090	-1.864	18.836	4.658	1.13	1.13	1.13	1.13	0.16	0.00	0.16
198 7	-0.045	-1.065	-0.080	-1.495	14.369	2.352	1.13	1.13	1.13	1.13	0.13	0.00	0.12
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
199 1A	0.107	0.158	0.074	0.701	8.708	9.996	1.13	1.13	1.13	1.13	0.06	0.00	0.08
199 1B	0.068	0.158	0.016	0.701	8.708	9.996	1.13	1.13	1.13	1.13	0.06	0.00	0.08
199 1C	0.107	0.549	0.074	1.097	9.629	12.343	1.13	1.13	1.13	1.13	0.10	0.00	0.10
199 1D	0.068	0.549	0.016	1.097	9.629	12.343	1.13	1.13	1.13	1.13	0.10	0.00	0.10
199 1I	0.104	0.193	0.070	0.756	8.899	10.493	1.13	1.13	1.13	1.13	0.07	0.00	0.09
199 1J	0.071	0.193	0.021	0.756	8.899	10.493	1.13	1.13	1.13	1.13	0.07	0.00	0.09
199 1K	0.104	0.514	0.070	1.042	9.533	11.687	1.13	1.13	1.13	1.13	0.10	0.00	0.10
199 1L	0.071	0.514	0.021	1.042	9.533	11.687	1.13	1.13	1.13	1.13	0.09	0.00	0.10
199 2	0.139	0.590	0.063	1.619	13.790	19.302	1.13	1.13	1.13	1.13	0.14	0.00	0.16
199 7	0.093	-0.418	0.074	1.553	5.277	20.049	1.13	1.13	1.13	1.13	0.14	0.00	0.17
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
200 1A	0.091	1.074	0.062	-0.511	5.373	9.450	1.13	1.13	1.13	1.13	0.10	0.00	0.08
200 1B	0.060	1.074	0.010	-0.511	5.373	9.450	1.13	1.13	1.13	1.13	0.10	0.00	0.08
200 1C	0.091	1.223	0.062	-0.043	7.080	10.957	1.13	1.13	1.13	1.13	0.11	0.00	0.09
200 1D	0.060	1.223	0.010	-0.043	7.080	10.957	1.13	1.13	1.13	1.13	0.11	0.00	0.09
200 1I	0.091	1.090	0.058	-0.460	5.388	10.136	1.13	1.13	1.13	1.13	0.10	0.00	0.08
200 1J	0.061	1.090	0.014	-0.460	5.388	10.136	1.13	1.13	1.13	1.13	0.10	0.00	0.08
200 1K	0.091	1.208	0.058	-0.093	6.873	10.618	1.13	1.13	1.13	1.13	0.11	0.00	0.09
200 1L	0.061	1.208	0.014	-0.093	6.873	10.618	1.13	1.13	1.13	1.13	0.11	0.00	0.09
200 2	0.111	2.056	0.059	-0.479	9.361	20.304	1.13	1.13	1.13	1.13	0.18	0.00	0.17
200 7	0.090	1.901	0.034	-0.459	3.847	19.690	1.13	1.13	1.13	1.13	0.17	0.00	0.16
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
201 1A	0.052	-0.308	0.092	0.960	8.995	1.351	1.13	1.13	1.13	1.13	0.09	0.00	0.08
201 1B	0.041	-0.308	0.039	0.960	8.995	1.351	1.13	1.13	1.13	1.13	0.09	0.00	0.08
201 1C	0.052	-0.168	0.092	1.416	10.180	1.039	1.13	1.13	1.13	1.13	0.13	0.00	0.09
201 1D	0.041	-0.168	0.039	1.416	10.180	1.039	1.13	1.13	1.13	1.13	0.13	0.00	0.09
201 1I	0.051	-0.299	0.089	1.018	9.221	1.317	1.13	1.13	1.13	1.13	0.09	0.00	0.08
201 1J	0.041	-0.299	0.042	1.018	9.221	1.317	1.13	1.13	1.13	1.13	0.09	0.00	0.08
201 1K	0.051	-0.176	0.089	1.358	10.188	1.147	1.13	1.13	1.13	1.13	0.12	0.00	0.09
201 1L	0.041	-0.176	0.042	1.358	10.188	1.147	1.13	1.13	1.13	1.13	0.12	0.00	0.09
201 2	0.075	-0.409	0.094	2.126	18.330	1.836	1.13	1.13	1.13	1.13	0.19	0.00	0.15
201 7	0.046	-0.296	0.083	1.880	14.969	2.366	1.13	1.13	1.13	1.13	0.17	0.00	0.13
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
202 1A	0.030	-0.293	0.088	1.083	11.735	3.607	1.13	1.13	1.13	1.13	0.10	0.00	0.10
202 1B	0.001	-0.293	0.028	1.083	11.735	3.607	1.13	1.13	1.13	1.13	0.10	0.00	0.10
202 1C	0.030	-0.074	0.088	1.380	13.376	1.073	1.13	1.13	1.13	1.13	0.13	0.00	0.11
202 1D	0.001	-0.074	0.028	1.380	13.376	1.073	1.13	1.13	1.13	1.13	0.13	0.00	0.11
202 1I	0.028	-0.293	0.087	1.125	11.848	3.281	1.13	1.13	1.13	1.13	0.10	0.00	0.10
202 1J	0.003	-0.293	0.028	1.125	11.848	3.281	1.13	1.13	1.13	1.13	0.10	0.00	0.10
202 1K	0.028	-0.074	0.087	1.339	13.312	1.160	1.13	1.13	1.13	1.13	0.12	0.00	0.11
202 1L	0.003	-0.074	0.028	1.339	13.312	1.160	1.13	1.13	1.13	1.13	0.12	0.00	0.11
202 2	0.023	-0.339	0.077	2.229	23.603	4.955	1.13	1.13	1.13	1.13	0.20	0.00	0.20
202 7	0.008	-0.317	0.041	1.877	19.968	7.597	1.13	1.13	1.13	1.13	0.16	0.00	0.17
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)													
203 1A	0.066	1.123	-0.005	0.236	6.365	0.082	1.13	1.13	1.13	1.13	0.10	0.00	0.05

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

203	1B	0.014	1.123	-0.029	0.236	6.365	0.082	1.13	1.13	1.13	1.13	0.10	0.00	0.05
203	1C	0.066	1.406	-0.005	0.403	7.468	1.368	1.13	1.13	1.13	1.13	0.13	0.00	0.06
203	1D	0.014	1.406	-0.029	0.403	7.468	1.368	1.13	1.13	1.13	1.13	0.13	0.00	0.06
203	1I	0.065	1.136	-0.003	0.228	6.717	0.192	1.13	1.13	1.13	1.13	0.10	0.00	0.06
203	1J	0.015	1.136	-0.030	0.228	6.717	0.192	1.13	1.13	1.13	1.13	0.10	0.00	0.06
203	1K	0.065	1.393	-0.003	0.411	7.336	1.378	1.13	1.13	1.13	1.13	0.13	0.00	0.06
203	1L	0.015	1.393	-0.030	0.411	7.336	1.378	1.13	1.13	1.13	1.13	0.13	0.00	0.06
203	2	0.049	2.298	-0.035	0.582	12.515	1.162	1.13	1.13	1.13	1.13	0.20	0.00	0.10
203	7	0.015	1.911	-0.016	0.636	10.012	2.407	1.13	1.13	1.13	1.13	0.17	0.00	0.08
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
204	1A	0.062	1.173	0.043	-0.406	10.482	10.009	1.13	1.13	1.13	1.13	0.11	0.00	0.09
204	1B	0.015	1.173	0.005	-0.406	10.482	10.009	1.13	1.13	1.13	1.13	0.11	0.00	0.09
204	1C	0.062	1.395	0.043	-0.143	9.935	11.527	1.13	1.13	1.13	1.13	0.13	0.00	0.10
204	1D	0.015	1.395	0.005	-0.143	9.935	11.527	1.13	1.13	1.13	1.13	0.13	0.00	0.10
204	1I	0.059	1.203	0.044	-0.404	10.404	10.481	1.13	1.13	1.13	1.13	0.11	0.00	0.09
204	1J	0.018	1.203	0.003	-0.404	10.404	10.481	1.13	1.13	1.13	1.13	0.11	0.00	0.09
204	1K	0.059	1.364	0.044	-0.145	10.038	10.830	1.13	1.13	1.13	1.13	0.12	0.00	0.09
204	1L	0.018	1.364	0.003	-0.145	10.038	10.830	1.13	1.13	1.13	1.13	0.12	0.00	0.09
204	2	0.042	2.345	0.036	-0.520	20.020	20.397	1.13	1.13	1.13	1.13	0.21	0.00	0.17
204	7	0.021	2.069	0.015	-0.497	19.234	15.692	1.13	1.13	1.13	1.13	0.18	0.00	0.16
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
205	1A	0.049	-1.293	0.101	-0.571	13.624	13.231	1.13	1.13	1.13	1.13	0.12	0.00	0.11
205	1B	0.018	-1.293	0.005	-0.571	13.624	13.231	1.13	1.13	1.13	1.13	0.12	0.00	0.11
205	1C	0.049	-0.631	0.101	-0.237	3.407	5.670	1.13	1.13	1.13	1.13	0.06	0.00	0.05
205	1D	0.018	-0.631	0.005	-0.237	3.407	5.670	1.13	1.13	1.13	1.13	0.06	0.00	0.05
205	1I	0.046	-1.426	0.090	-0.644	14.403	13.641	1.13	1.13	1.13	1.13	0.13	0.00	0.12
205	1J	0.022	-1.426	0.016	-0.644	14.403	13.641	1.13	1.13	1.13	1.13	0.13	0.00	0.12
205	1K	0.046	-0.498	0.090	-0.164	2.199	4.611	1.13	1.13	1.13	1.13	0.05	0.00	0.04
205	1L	0.022	-0.498	0.016	-0.164	2.199	4.611	1.13	1.13	1.13	1.13	0.05	0.00	0.04
205	2	0.049	-1.630	0.066	-0.675	14.078	15.854	1.13	1.13	1.13	1.13	0.14	0.00	0.13
205	7	0.009	-0.925	0.040	-0.340	6.733	11.513	1.13	1.13	1.13	1.13	0.08	0.00	0.10
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
206	1A	0.026	-2.501	0.123	-2.259	8.696	45.891	1.13	1.13	1.13	1.13	0.23	0.00	0.38
206	1B	0.010	-2.501	0.014	-2.259	8.696	45.891	1.13	1.13	1.13	1.13	0.23	0.00	0.38
206	1C	0.026	-0.875	0.123	0.451	3.880	17.481	1.13	1.13	1.13	1.13	0.08	0.00	0.15
206	1D	0.010	-0.875	0.014	0.451	3.880	17.481	1.13	1.13	1.13	1.13	0.08	0.00	0.15
206	1I	0.024	-2.593	0.110	-2.604	12.383	48.277	1.13	1.13	1.13	1.13	0.24	0.00	0.40
206	1J	0.012	-2.593	0.026	-2.604	12.383	48.277	1.13	1.13	1.13	1.13	0.24	0.00	0.40
206	1K	0.024	-0.783	0.110	0.795	4.053	11.631	1.13	1.13	1.13	1.13	0.07	0.00	0.10
206	1L	0.012	-0.783	0.026	0.795	4.053	11.631	1.13	1.13	1.13	1.13	0.07	0.00	0.10
206	2	0.027	-2.831	0.092	-1.420	8.544	61.191	1.13	1.13	1.13	1.13	0.25	0.00	0.51
206	7	0.006	-1.633	0.045	-0.932	17.437	29.975	1.13	1.13	1.13	1.13	0.14	0.00	0.25
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
207	1A	0.031	-1.563	0.121	-0.407	20.103	15.559	1.13	1.13	1.13	1.13	0.14	0.00	0.17
207	1B	0.006	-1.563	0.008	-0.407	20.103	15.559	1.13	1.13	1.13	1.13	0.14	0.00	0.17
207	1C	0.031	-0.676	0.121	-0.008	9.693	5.848	1.13	1.13	1.13	1.13	0.06	0.00	0.08
207	1D	0.006	-0.676	0.008	-0.008	9.693	5.848	1.13	1.13	1.13	1.13	0.06	0.00	0.08
207	1I	0.028	-1.726	0.107	-0.470	22.088	16.029	1.13	1.13	1.13	1.13	0.16	0.00	0.18
207	1J	0.009	-1.726	0.022	-0.470	22.088	16.029	1.13	1.13	1.13	1.13	0.16	0.00	0.18
207	1K	0.028	-0.513	0.107	0.055	7.822	5.122	1.13	1.13	1.13	1.13	0.05	0.00	0.07
207	1L	0.009	-0.513	0.022	0.055	7.822	5.122	1.13	1.13	1.13	1.13	0.05	0.00	0.07
207	2	0.028	-1.904	0.086	-0.343	25.412	16.880	1.13	1.13	1.13	1.13	0.17	0.00	0.21
207	7	0.006	-1.036	0.040	-0.303	15.900	6.107	1.13	1.13	1.13	1.13	0.09	0.00	0.13
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
208	1A	0.024	-1.197	0.042	-0.277	17.523	14.786	1.13	1.13	1.13	1.13	0.11	0.00	0.15
208	1B	0.009	-1.197	-0.008	-0.277	17.523	14.786	1.13	1.13	1.13	1.13	0.11	0.00	0.15
208	1C	0.024	-0.716	0.042	0.011	13.290	10.118	1.13	1.13	1.13	1.13	0.07	0.00	0.11
208	1D	0.009	-0.716	-0.008	0.011	13.290	10.118	1.13	1.13	1.13	1.13	0.07	0.00	0.11
208	1I	0.027	-1.166	0.048	-0.272	17.415	14.622	1.13	1.13	1.13	1.13	0.11	0.00	0.15
208	1J	0.006	-1.166	-0.014	-0.272	17.415	14.622	1.13	1.13	1.13	1.13	0.11	0.00	0.15
208	1K	0.027	-0.747	0.048	0.007	13.483	10.167	1.13	1.13	1.13	1.13	0.07	0.00	0.11
208	1L	0.006	-0.747	-0.014	0.007	13.483	10.167	1.13	1.13	1.13	1.13	0.07	0.00	0.11
208	2	-0.029	-1.859	-0.034	-0.272	28.979	21.595	1.13	1.13	1.13	1.13	0.16	0.00	0.24
208	7	-0.021	-1.724	-0.039	-0.282	26.512	18.849	1.13	1.13	1.13	1.13	0.15	0.00	0.22
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
209	1A	0.044	-1.054	-0.015	-0.403	3.832	10.262	1.13	1.13	1.13	1.13	0.10	0.00	0.09
209	1B	0.032	-1.054	-0.058	-0.403	3.832	10.262	1.13	1.13	1.13	1.13	0.10	0.00	0.09
209	1C	0.044	-0.726	-0.015	-0.183	0.728	7.103	1.13	1.13	1.13	1.13	0.07	0.00	0.06
209	1D	0.032	-0.726	-0.058	-0.183	0.728	7.103	1.13	1.13	1.13	1.13	0.07	0.00	0.06
209	1I	0.047	-1.022	-0.009	-0.412	3.705	10.182	1.13	1.13	1.13	1.13	0.09	0.00	0.09
209	1J	0.029	-1.022	-0.063	-0.412	3.705	10.182	1.13	1.13	1.13	1.13	0.09	0.00	0.08
209	1K	0.047	-0.758	-0.009	-0.174	0.632	7.145	1.13	1.13	1.13	1.13	0.07	0.00	0.06
209	1L	0.029	-0.758	-0.063	-0.174	0.632	7.145	1.13	1.13	1.13	1.13	0.07	0.00	0.06
209	2	0.065	-1.725	-0.068	-0.580	5.394	18.848	1.13	1.13	1.13	1.13	0.15	0.00	0.16
209	7	0.039	-1.567	-0.059	-0.498	5.239	17.165	1.13	1.13	1.13	1.13	0.14	0.00	0.14
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
210	1A	-0.010	-1.693	0.009	-0.999	3.202	20.674	1.13	1.13	1.13	1.13	0.15	0.00	0.17
210	1B	-0.027	-1.693	-0.047	-0.999	3.202	20.674	1.13	1.13	1.13	1.13	0.15	0.00	0.17
210	1C	-0.010	-1.160	0.009	-0.129	3.077	14.053	1.13	1.13	1.13	1.13	0.11	0.00	0.12
210	1D	-0.027	-1.160	-0.047	-0.129	3.077	14.053	1.13	1.13	1.13	1.13	0.11	0.00	0.12
210	1I	-0.006	-1.730	0.016	-1.146	3.410	22.201	1.13	1.13	1.13	1.13	0.16	0.00	0.19
210	1J	-0.031	-1.730	-0.054	-1.146	3.410	22.201	1.13	1.13	1.13	1.13	0.16	0.00	0.19
210	1K	-0.006	-1.123	0.016	0.018	2.279	13.288	1.13	1.13	1.13	1.13	0.10	0.00	0.11
210	1L	-0.031	-1.123	-0.054	0.018	2.279	13.288	1.13	1.13	1.13	1.13	0.10	0.00	0.10
210	2	-0.034	-2.786	-0.040	-1.143	6.019	34.397	1.13	1.13	1.13	1.13	0.24	0.00	0.29
210	7	-0.025	-2.520	-0.044	-1.057	5.372	30.256	1.13	1.13	1.13	1.13	0.22	0.00	0.25
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)														
211	1A	0.023	-0.149	0.145	-0.960	5.051	3.118	1.13	1.13	1.13	1.13	0.09	0.00	0.04
211	1B	0.008	-0.149	0.043	-0.960	5.051	3.118	1.13	1.13	1.13	1.13	0.09	0.00	0.04

**Relazione di calcolo delle opere strutturali****Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10**

211	1C	0.023	-0.250	0.145	-0.336	2.100	5.610	1.13	1.13	1.13	1.13	0.03	0.00	0.05
211	1D	0.008	-0.250	0.043	-0.336	2.100	5.610	1.13	1.13	1.13	1.13	0.03	0.00	0.05
211	1I	0.022	-0.165	0.137	-0.899	4.776	3.941	1.13	1.13	1.13	1.13	0.08	0.00	0.04
211	1J	0.009	-0.165	0.050	-0.899	4.776	3.941	1.13	1.13	1.13	1.13	0.08	0.00	0.04
211	1K	0.022	-0.234	0.137	-0.397	2.407	5.058	1.13	1.13	1.13	1.13	0.04	0.00	0.04
211	1L	0.009	-0.234	0.050	-0.397	2.407	5.058	1.13	1.13	1.13	1.13	0.04	0.00	0.04
211	2	0.023	-0.319	0.138	-1.204	5.861	9.323	1.13	1.13	1.13	1.13	0.11	0.00	0.08
211	7	0.017	-0.178	0.094	-1.137	4.765	6.912	1.13	1.13	1.13	1.13	0.10	0.00	0.06
Spess. =	30.0 cm	Axxinf = --		Axxsup = --		Ayyinf = --		Ayysup = --		(e arm. base nelle due direz.)				
212	1A	0.027	-0.711	0.132	-1.286	16.691	3.638	1.13	1.13	1.13	1.13	0.12	0.00	0.14
212	1B	0.000	-0.711	0.022	-1.286	16.691	3.638	1.13	1.13	1.13	1.13	0.12	0.00	0.14
212	1C	0.027	-0.344	0.132	-0.862	13.303	1.865	1.13	1.13	1.13	1.13	0.08	0.00	0.11
212	1D	0.000	-0.344	0.022	-0.862	13.303	1.865	1.13	1.13	1.13	1.13	0.08	0.00	0.11
212	1I	0.024	-0.703	0.123	-1.339	17.060	2.470	1.13	1.13	1.13	1.13	0.12	0.00	0.14
212	1J	0.003	-0.703	0.032	-1.339	17.060	2.470	1.13	1.13	1.13	1.13	0.12	0.00	0.14
212	1K	0.024	-0.352	0.123	-0.808	12.931	2.853	1.13	1.13	1.13	1.13	0.07	0.00	0.11
212	1L	0.003	-0.352	0.032	-0.808	12.931	2.853	1.13	1.13	1.13	1.13	0.07	0.00	0.11
212	2	0.019	-0.962	0.107	-1.897	27.011	8.696	1.13	1.13	1.13	1.13	0.17	0.00	0.23
212	7	0.013	-0.663	0.067	-1.506	18.323	11.655	1.13	1.13	1.13	1.13	0.13	0.00	0.15
Spess. =	30.0 cm	Axxinf = --		Axxsup = --		Ayyinf = --		Ayysup = --		(e arm. base nelle due direz.)				
213	1A	0.054	-0.257	0.120	-0.970	4.594	4.803	1.13	1.13	1.13	1.13	0.09	0.00	0.04
213	1B	0.020	-0.257	0.025	-0.970	4.594	4.803	1.13	1.13	1.13	1.13	0.09	0.00	0.04
213	1C	0.054	-0.032	0.120	-0.568	3.112	6.559	1.13	1.13	1.13	1.13	0.05	0.00	0.05
213	1D	0.020	-0.032	0.025	-0.568	3.112	6.559	1.13	1.13	1.13	1.13	0.05	0.00	0.05
213	1I	0.050	-0.243	0.112	-0.975	4.911	5.773	1.13	1.13	1.13	1.13	0.09	0.00	0.05
213	1J	0.024	-0.243	0.033	-0.975	4.911	5.773	1.13	1.13	1.13	1.13	0.09	0.00	0.05
213	1K	0.050	-0.046	0.112	-0.562	3.231	5.334	1.13	1.13	1.13	1.13	0.05	0.00	0.04
213	1L	0.024	-0.046	0.033	-0.562	3.231	5.334	1.13	1.13	1.13	1.13	0.05	0.00	0.04
213	2	0.053	-0.227	0.101	-1.369	10.006	8.991	1.13	1.13	1.13	1.13	0.12	0.00	0.08
213	7	0.010	-0.174	0.067	-1.104	5.633	5.522	1.13	1.13	1.13	1.13	0.10	0.00	0.05
Spess. =	30.0 cm	Axxinf = --		Axxsup = --		Ayyinf = --		Ayysup = --		(e arm. base nelle due direz.)				
214	1A	-0.033	-1.001	0.049	-0.734	2.291	12.970	1.13	1.13	1.13	1.13	0.09	0.00	0.11
214	1B	-0.074	-1.001	0.012	-0.734	2.291	12.970	1.13	1.13	1.13	1.13	0.09	0.00	0.11
214	1C	-0.033	-0.862	0.049	-0.287	2.005	8.961	1.13	1.13	1.13	1.13	0.08	0.00	0.07
214	1D	-0.074	-0.862	0.012	-0.287	2.005	8.961	1.13	1.13	1.13	1.13	0.08	0.00	0.07
214	1I	-0.029	-1.054	0.052	-0.746	2.912	12.307	1.13	1.13	1.13	1.13	0.10	0.00	0.10
214	1J	-0.078	-1.054	0.009	-0.746	2.912	12.307	1.13	1.13	1.13	1.13	0.09	0.00	0.10
214	1K	-0.029	-0.809	0.052	-0.275	2.342	8.399	1.13	1.13	1.13	1.13	0.07	0.00	0.07
214	1L	-0.078	-0.809	0.009	-0.275	2.342	8.399	1.13	1.13	1.13	1.13	0.07	0.00	0.07
214	2	-0.107	-1.970	0.053	-0.987	5.529	26.628	1.13	1.13	1.13	1.13	0.17	0.00	0.22
214	7	-0.097	-1.629	0.033	-0.887	3.663	24.544	1.13	1.13	1.13	1.13	0.14	0.00	0.21
Spess. =	30.0 cm	Axxinf = --		Axxsup = --		Ayyinf = --		Ayysup = --		(e arm. base nelle due direz.)				
215	1A	0.041	-1.386	-0.039	-1.609	16.826	16.490	1.13	1.13	1.13	1.13	0.15	0.00	0.14
215	1B	0.032	-1.386	-0.093	-1.609	16.826	16.490	1.13	1.13	1.13	1.13	0.15	0.00	0.14
215	1C	0.041	-0.899	-0.039	-1.086	14.715	13.542	1.13	1.13	1.13	1.13	0.10	0.00	0.12
215	1D	0.032	-0.899	-0.093	-1.086	14.715	13.542	1.13	1.13	1.13	1.13	0.10	0.00	0.12
215	1I	0.043	-1.393	-0.035	-1.699	17.501	16.424	1.13	1.13	1.13	1.13	0.15	0.00	0.15
215	1J	0.030	-1.393	-0.097	-1.699	17.501	16.424	1.13	1.13	1.13	1.13	0.15	0.00	0.15
215	1K	0.043	-0.892	-0.035	-0.996	15.434	13.770	1.13	1.13	1.13	1.13	0.09	0.00	0.13
215	1L	0.030	-0.892	-0.097	-0.996	15.434	13.770	1.13	1.13	1.13	1.13	0.09	0.00	0.13
215	2	0.061	-2.250	-0.129	-2.852	27.543	24.086	1.13	1.13	1.13	1.13	0.25	0.00	0.23
215	7	0.032	-2.107	-0.109	-2.293	23.822	23.085	1.13	1.13	1.13	1.13	0.20	0.00	0.20
Spess. =	30.0 cm	Axxinf = --		Axxsup = --		Ayyinf = --		Ayysup = --		(e arm. base nelle due direz.)				
216	1A	0.089	0.796	0.014	0.659	15.963	19.968	1.13	1.13	1.13	1.13	0.07	0.00	0.17
216	1B	0.028	0.796	-0.026	0.659	15.963	19.968	1.13	1.13	1.13	1.13	0.07	0.00	0.17
216	1C	0.089	1.141	0.014	0.821	17.835	18.083	1.13	1.13	1.13	1.13	0.10	0.00	0.15
216	1D	0.028	1.141	-0.026	0.821	17.835	18.083	1.13	1.13	1.13	1.13	0.10	0.00	0.15
216	1I	0.086	0.811	0.015	0.689	16.325	20.275	1.13	1.13	1.13	1.13	0.07	0.00	0.17
216	1J	0.032	0.811	-0.028	0.689	16.325	20.275	1.13	1.13	1.13	1.13	0.07	0.00	0.17
216	1K	0.086	1.126	0.015	0.791	17.384	17.850	1.13	1.13	1.13	1.13	0.10	0.00	0.15
216	1L	0.032	1.126	-0.028	0.791	17.384	17.850	1.13	1.13	1.13	1.13	0.10	0.00	0.15
216	2	0.079	1.747	-0.013	1.351	32.304	34.772	1.13	1.13	1.13	1.13	0.15	0.00	0.29
216	7	0.042	1.347	0.007	1.277	24.252	32.754	1.13	1.13	1.13	1.13	0.12	0.00	0.27
Spess. =	30.0 cm	Axxinf = --		Axxsup = --		Ayyinf = --		Ayysup = --		(e arm. base nelle due direz.)				
217	1A	0.077	1.120	0.056	-0.472	11.774	12.127	1.13	1.13	1.13	1.13	0.10	0.00	0.10
217	1B	0.056	1.120	-0.004	-0.472	11.774	12.127	1.13	1.13	1.13	1.13	0.10	0.00	0.10
217	1C	0.077	1.277	0.056	-0.069	13.949	11.630	1.13	1.13	1.13	1.13	0.12	0.00	0.12
217	1D	0.056	1.277	-0.004	-0.069	13.949	11.630	1.13	1.13	1.13	1.13	0.12	0.00	0.12
217	1I	0.074	1.118	0.054	-0.441	12.141	12.218	1.13	1.13	1.13	1.13	0.10	0.00	0.10
217	1J	0.060	1.118	-0.002	-0.441	12.141	12.218	1.13	1.13	1.13	1.13	0.10	0.00	0.10
217	1K	0.074	1.279	0.054	-0.100	13.627	11.189	1.13	1.13	1.13	1.13	0.12	0.00	0.11
217	1L	0.060	1.279	-0.002	-0.100	13.627	11.189	1.13	1.13	1.13	1.13	0.12	0.00	0.11
217	2	0.093	2.171	0.040	-0.502	23.741	20.146	1.13	1.13	1.13	1.13	0.19	0.00	0.20
217	7	0.061	1.870	0.017	-0.481	18.115	18.833	1.13	1.13	1.13	1.13	0.16	0.00	0.16
Spess. =	30.0 cm	Axxinf = --		Axxsup = --		Ayyinf = --		Ayysup = --		(e arm. base nelle due direz.)				
218	1A	0.041	-0.258	0.105	0.814	3.746	7.466	1.13	1.13	1.13	1.13	0.08	0.00	0.06
218	1B	0.019	-0.258	0.040	0.814	3.746	7.466	1.13	1.13	1.13	1.13	0.07	0.00	0.06
218	1C	0.041	-0.090	0.105	1.234	5.122	5.519	1.13	1.13	1.13	1.13	0.11	0.00	0.05
218	1D	0.019	-0.090	0.040	1.234	5.122	5.519	1.13	1.13	1.13	1.13	0.11	0.00	0.05
218	1I	0.040	-0.258	0.103	0.857	3.676	7.296	1.13	1.13	1.13	1.13	0.08	0.00	0.06
218	1J	0.019	-0.258	0.042	0.857	3.676	7.296	1.13	1.13	1.13	1.13	0.08	0.00	0.06
218	1K	0.040	-0.090	0.103	1.191	5.215	5.537	1.13	1.13	1.13	1.13	0.11	0.00	0.05
218	1L	0.019	-0.090	0.042	1.191	5.215	5.537	1.13	1.13	1.13	1.13	0.11	0.00	0.05
218	2	0.045	-0.325	0.103	1.843	8.771	11.293	1.13	1.13	1.13	1.13	0.16	0.00	0.09
218	7	0.017	-0.358	0.069	1.582	7.330	11.318	1.13	1.13	1.13	1.13	0.14	0.00	0.09
Spess. =	30.0 cm	Axxinf = --		Axxsup = --		Ayyinf = --		Ayysup = --		(e arm. base nelle due direz.)				
219	1A	0.132	-1.053	0.089	-1.435	10.447	15.219	1.13	1.13	1.13	1.13	0.13	0.00	0.13
219	1B	0.062	-1.053	-0.010	-1.435	10.447	15.219	1.13	1.13	1.13	1.13	0.13	0.00	0.13
219	1C	0.132	-0.576	0.089	-0.483	4.245	8.787							

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

219	1D	0.062	-0.576	-0.010	-0.483	4.245	8.787	1.13	1.13	1.13	1.13	0.05	0.00	0.07
219	1I	0.126	-1.240	0.074	-1.705	9.307	14.774	1.13	1.13	1.13	1.13	0.16	0.00	0.12
219	1J	0.068	-1.240	0.005	-1.705	9.307	14.774	1.13	1.13	1.13	1.13	0.15	0.00	0.12
219	1K	0.126	-0.389	0.074	-0.213	2.426	10.077	1.13	1.13	1.13	1.13	0.04	0.00	0.08
219	1L	0.068	-0.389	0.005	-0.213	2.426	10.077	1.13	1.13	1.13	1.13	0.04	0.00	0.08
219	2	0.150	-1.510	0.049	-1.668	16.594	19.595	1.13	1.13	1.13	1.13	0.15	0.00	0.16
219	7	0.075	-1.484	0.061	-1.231	1.578	21.238	1.13	1.13	1.13	1.13	0.13	0.00	0.18

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

220	1A	0.114	-0.907	0.094	-0.668	1.267	9.802	1.13	1.13	1.13	1.13	0.08	0.00	0.08
220	1B	0.059	-0.907	-0.009	-0.668	1.267	9.802	1.13	1.13	1.13	1.13	0.08	0.00	0.08
220	1C	0.114	-0.736	0.094	0.056	0.820	4.432	1.13	1.13	1.13	1.13	0.07	0.00	0.04
220	1D	0.059	-0.736	-0.009	0.056	0.820	4.432	1.13	1.13	1.13	1.13	0.07	0.00	0.04
220	1I	0.104	-0.981	0.083	-0.881	3.017	11.292	1.13	1.13	1.13	1.13	0.09	0.00	0.09
220	1J	0.070	-0.981	0.003	-0.881	3.017	11.292	1.13	1.13	1.13	1.13	0.09	0.00	0.09
220	1K	0.104	-0.662	0.083	0.269	2.703	4.030	1.13	1.13	1.13	1.13	0.06	0.00	0.03
220	1L	0.070	-0.662	0.003	0.269	2.703	4.030	1.13	1.13	1.13	1.13	0.06	0.00	0.03
220	2	0.125	-1.458	0.068	-0.565	4.301	12.641	1.13	1.13	1.13	1.13	0.13	0.00	0.11
220	7	0.081	-1.511	0.025	-0.216	8.333	2.179	1.13	1.13	1.13	1.13	0.13	0.00	0.07

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

221	1A	0.028	-1.303	0.131	-1.907	9.819	2.307	1.13	1.13	1.13	1.13	0.17	0.00	0.08
221	1B	-0.049	-1.303	0.041	-1.907	9.819	2.307	1.13	1.13	1.13	1.13	0.17	0.00	0.08
221	1C	0.028	-0.201	0.131	-0.653	1.732	4.530	1.13	1.13	1.13	1.13	0.06	0.00	0.04
221	1D	-0.049	-0.201	0.041	-0.653	1.732	4.530	1.13	1.13	1.13	1.13	0.06	0.00	0.04
221	1I	0.016	-1.529	0.122	-1.937	12.420	1.350	1.13	1.13	1.13	1.13	0.18	0.00	0.10
221	1J	-0.037	-1.529	0.050	-1.937	12.420	1.350	1.13	1.13	1.13	1.13	0.18	0.00	0.10
221	1K	0.016	0.025	0.122	-0.623	0.729	6.135	1.13	1.13	1.13	1.13	0.06	0.00	0.05
221	1L	-0.037	0.025	0.050	-0.623	0.729	6.135	1.13	1.13	1.13	1.13	0.06	0.00	0.05
221	2	-0.023	-1.308	0.125	-2.241	6.531	10.060	1.13	1.13	1.13	1.13	0.20	0.00	0.08
221	7	0.014	-0.429	0.067	-1.586	6.395	4.726	1.13	1.13	1.13	1.13	0.14	0.00	0.05

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

222	1A	0.038	-0.332	0.160	-0.317	3.596	8.178	1.13	1.13	1.13	1.13	0.03	0.00	0.07
222	1B	0.023	-0.332	0.081	-0.317	3.596	8.178	1.13	1.13	1.13	1.13	0.03	0.00	0.07
222	1C	0.038	-0.238	0.160	0.646	2.433	3.422	1.13	1.13	1.13	1.13	0.06	0.00	0.03
222	1D	0.023	-0.238	0.081	0.646	2.433	3.422	1.13	1.13	1.13	1.13	0.06	0.00	0.03
222	1I	0.036	-0.412	0.150	-0.286	5.562	10.674	1.13	1.13	1.13	1.13	0.04	0.00	0.09
222	1J	0.025	-0.412	0.092	-0.286	5.562	10.674	1.13	1.13	1.13	1.13	0.04	0.00	0.09
222	1K	0.036	-0.157	0.150	0.615	2.062	1.985	1.13	1.13	1.13	1.13	0.06	0.00	0.02
222	1L	0.025	-0.157	0.092	0.615	2.062	1.985	1.13	1.13	1.13	1.13	0.06	0.00	0.02
222	2	0.050	-0.465	0.190	0.190	4.045	9.467	1.13	1.13	1.13	1.13	0.04	0.00	0.08
222	7	0.027	-0.189	0.149	-0.142	2.245	12.765	1.13	1.13	1.13	1.13	0.02	0.00	0.11

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

223	1A	0.130	0.341	0.079	-0.839	6.570	0.466	1.13	1.13	1.13	1.13	0.08	0.00	0.05
223	1B	0.099	0.341	0.007	-0.839	6.570	0.466	1.13	1.13	1.13	1.13	0.08	0.00	0.05
223	1C	0.130	0.665	0.079	-0.086	5.038	1.738	1.13	1.13	1.13	1.13	0.06	0.00	0.04
223	1D	0.099	0.665	0.007	-0.086	5.038	1.738	1.13	1.13	1.13	1.13	0.06	0.00	0.04
223	1I	0.125	0.361	0.071	-0.810	7.615	0.059	1.13	1.13	1.13	1.13	0.07	0.00	0.06
223	1J	0.103	0.361	0.015	-0.810	7.615	0.059	1.13	1.13	1.13	1.13	0.07	0.00	0.06
223	1K	0.125	0.646	0.071	-0.114	3.741	1.023	1.13	1.13	1.13	1.13	0.06	0.00	0.03
223	1L	0.103	0.646	0.015	-0.114	3.741	1.023	1.13	1.13	1.13	1.13	0.06	0.00	0.03
223	2	0.179	0.823	0.070	-0.801	11.267	0.454	1.13	1.13	1.13	1.13	0.07	0.00	0.09
223	7	0.143	0.574	0.040	-0.473	6.854	1.483	1.13	1.13	1.13	1.13	0.05	0.00	0.06

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

224	1A	0.096	-0.377	0.108	0.457	3.949	13.598	1.13	1.13	1.13	1.13	0.04	0.00	0.11
224	1B	0.063	-0.377	0.048	0.457	3.949	13.598	1.13	1.13	1.13	1.13	0.04	0.00	0.11
224	1C	0.096	0.016	0.108	1.017	5.210	11.818	1.13	1.13	1.13	1.13	0.09	0.00	0.10
224	1D	0.063	0.016	0.048	1.017	5.210	11.818	1.13	1.13	1.13	1.13	0.09	0.00	0.10
224	1I	0.093	-0.358	0.101	0.540	4.449	13.435	1.13	1.13	1.13	1.13	0.05	0.00	0.11
224	1J	0.066	-0.358	0.055	0.540	4.449	13.435	1.13	1.13	1.13	1.13	0.05	0.00	0.11
224	1K	0.093	-0.003	0.101	0.934	5.005	11.181	1.13	1.13	1.13	1.13	0.09	0.00	0.09
224	1L	0.066	-0.003	0.055	0.934	5.005	11.181	1.13	1.13	1.13	1.13	0.09	0.00	0.09
224	2	0.129	-0.312	0.118	1.284	7.952	21.758	1.13	1.13	1.13	1.13	0.11	0.00	0.18
224	7	0.083	-0.239	0.117	1.179	1.256	18.868	1.13	1.13	1.13	1.13	0.10	0.00	0.16

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

225	1A	0.099	-0.445	0.100	0.668	0.573	21.517	1.13	1.13	1.13	1.13	0.06	0.00	0.18
225	1B	0.046	-0.445	0.028	0.668	0.573	21.517	1.13	1.13	1.13	1.13	0.06	0.00	0.18
225	1C	0.099	-0.102	0.100	1.056	2.379	21.093	1.13	1.13	1.13	1.13	0.10	0.00	0.18
225	1D	0.046	-0.102	0.028	1.056	2.379	21.093	1.13	1.13	1.13	1.13	0.10	0.00	0.18
225	1I	0.094	-0.432	0.097	0.721	0.303	21.678	1.13	1.13	1.13	1.13	0.07	0.00	0.18
225	1J	0.051	-0.432	0.031	0.721	0.303	21.678	1.13	1.13	1.13	1.13	0.07	0.00	0.18
225	1K	0.094	-0.115	0.097	1.002	2.102	21.038	1.13	1.13	1.13	1.13	0.09	0.00	0.18
225	1L	0.051	-0.115	0.031	1.002	2.102	21.038	1.13	1.13	1.13	1.13	0.09	0.00	0.18
225	2	0.110	-0.497	0.094	1.531	0.875	40.643	1.13	1.13	1.13	1.13	0.13	0.00	0.34
225	7	0.059	-0.465	0.082	1.293	5.375	33.775	1.13	1.13	1.13	1.13	0.11	0.00	0.28

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

226	1A	0.116	0.521	0.067	-0.805	2.443	8.384	1.13	1.13	1.13	1.13	0.07	0.00	0.07
226	1B	0.088	0.521	-0.010	-0.805	2.443	8.384	1.13	1.13	1.13	1.13	0.07	0.00	0.07
226	1C	0.116	0.655	0.067	-0.170	4.112	8.563	1.13	1.13	1.13	1.13	0.06	0.00	0.07
226	1D	0.088	0.655	-0.010	-0.170	4.112	8.563	1.13	1.13	1.13	1.13	0.06	0.00	0.07
226	1I	0.116	0.542	0.061	-0.755	2.120	8.620	1.13	1.13	1.13	1.13	0.07	0.00	0.07
226	1J	0.089	0.542	-0.004	-0.755	2.120	8.620	1.13	1.13	1.13	1.13	0.07	0.00	0.07
226	1K	0.116	0.635	0.061	-0.220	3.519	8.566	1.13	1.13	1.13	1.13	0.06	0.00	0.07
226	1L	0.089	0.635	-0.004	-0.220	3.519	8.566	1.13	1.13	1.13	1.13	0.06	0.00	0.07
226	2	0.156	1.010	0.044	-0.885	2.528	15.783	1.13	1.13	1.13	1.13	0.09	0.00	0.13
226	7	0.109	0.812	0.018	-0.759	0.465	11.298	1.13	1.13	1.13	1.13	0.07	0.00	0.09

Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayyup= -- (e arm. base nelle due direz.)

227	1A	0.116	0.371	0.073	-0.459	6.446	0.838	1.13	1.13	1.13	1.13	0.04	0.00	0.05
227	1B	0.075	0.371	-0.021	-0.459	6.446	0.838	1.13	1.13	1.13	1.13	0.04		

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

227	1I	0.112	0.375	0.068	-0.412	6.578	0.908	1.13	1.13	1.13	1.13	0.04	0.00	0.05
227	1J	0.079	0.375	-0.016	-0.412	6.578	0.908	1.13	1.13	1.13	1.13	0.04	0.00	0.05
227	1K	0.112	0.598	0.068	0.013	7.045	4.774	1.13	1.13	1.13	1.13	0.06	0.00	0.06
227	1L	0.079	0.598	-0.016	0.013	7.045	4.774	1.13	1.13	1.13	1.13	0.06	0.00	0.06
227	2	0.144	0.826	0.039	-0.355	13.611	5.220	1.13	1.13	1.13	1.13	0.07	0.00	0.11
227	7	0.095	0.653	0.014	-0.333	13.663	3.638	1.13	1.13	1.13	1.13	0.06	0.00	0.11
Spess.= 30.0 cm Axxinf= -- Axsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
228	1A	-0.013	1.118	0.048	-0.554	10.307	5.093	1.13	1.13	1.13	1.13	0.10	0.00	0.09
228	1B	-0.041	1.118	0.002	-0.554	10.307	5.093	1.13	1.13	1.13	1.13	0.10	0.00	0.09
228	1C	-0.013	1.217	0.048	-0.223	9.212	5.910	1.13	1.13	1.13	1.13	0.11	0.00	0.08
228	1D	-0.041	1.217	0.002	-0.223	9.212	5.910	1.13	1.13	1.13	1.13	0.11	0.00	0.08
228	1I	-0.016	1.134	0.050	-0.546	9.723	5.224	1.13	1.13	1.13	1.13	0.10	0.00	0.08
228	1J	-0.038	1.134	0.000	-0.546	9.723	5.224	1.13	1.13	1.13	1.13	0.10	0.00	0.08
228	1K	-0.016	1.201	0.050	-0.230	8.867	5.911	1.13	1.13	1.13	1.13	0.11	0.00	0.07
228	1L	-0.038	1.201	0.000	-0.230	8.867	5.911	1.13	1.13	1.13	1.13	0.11	0.00	0.07
228	2	-0.070	2.140	0.039	-0.754	15.976	8.765	1.13	1.13	1.13	1.13	0.19	0.00	0.13
228	7	-0.052	1.986	0.020	-0.681	15.143	6.294	1.13	1.13	1.13	1.13	0.17	0.00	0.13
Spess.= 30.0 cm Axxinf= -- Axsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
229	1A	0.046	-0.506	-0.001	1.137	20.485	14.264	1.13	1.13	1.13	1.13	0.10	0.00	0.17
229	1B	0.031	-0.506	-0.057	1.137	20.485	14.264	1.13	1.13	1.13	1.13	0.10	0.00	0.17
229	1C	0.046	-0.364	-0.001	1.462	18.510	13.982	1.13	1.13	1.13	1.13	0.13	0.00	0.15
229	1D	0.031	-0.364	-0.057	1.462	18.510	13.982	1.13	1.13	1.13	1.13	0.13	0.00	0.15
229	1I	0.044	-0.507	-0.002	1.153	20.171	14.395	1.13	1.13	1.13	1.13	0.10	0.00	0.17
229	1J	0.032	-0.507	-0.056	1.153	20.171	14.395	1.13	1.13	1.13	1.13	0.10	0.00	0.17
229	1K	0.044	-0.363	-0.002	1.446	18.319	13.961	1.13	1.13	1.13	1.13	0.13	0.00	0.15
229	1L	0.032	-0.363	-0.056	1.446	18.319	13.961	1.13	1.13	1.13	1.13	0.13	0.00	0.15
229	2	0.057	-0.818	-0.068	2.370	36.873	26.545	1.13	1.13	1.13	1.13	0.21	0.00	0.31
229	7	0.028	-0.684	-0.043	2.104	34.935	19.707	1.13	1.13	1.13	1.13	0.18	0.00	0.29
Spess.= 30.0 cm Axxinf= -- Axsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
230	1A	0.043	1.092	-0.013	-0.615	5.860	11.059	1.13	1.13	1.13	1.13	0.10	0.00	0.09
230	1B	-0.004	1.092	-0.043	-0.615	5.860	11.059	1.13	1.13	1.13	1.13	0.10	0.00	0.09
230	1C	0.043	1.270	-0.013	-0.333	6.651	8.228	1.13	1.13	1.13	1.13	0.12	0.00	0.07
230	1D	-0.004	1.270	-0.043	-0.333	6.651	8.228	1.13	1.13	1.13	1.13	0.12	0.00	0.07
230	1I	0.042	1.125	-0.011	-0.607	5.807	11.467	1.13	1.13	1.13	1.13	0.10	0.00	0.10
230	1J	-0.002	1.125	-0.045	-0.607	5.807	11.467	1.13	1.13	1.13	1.13	0.10	0.00	0.10
230	1K	0.042	1.237	-0.011	-0.341	6.234	7.889	1.13	1.13	1.13	1.13	0.11	0.00	0.07
230	1L	-0.002	1.237	-0.045	-0.341	6.234	7.889	1.13	1.13	1.13	1.13	0.11	0.00	0.07
230	2	-0.051	2.138	-0.054	-0.899	10.658	17.481	1.13	1.13	1.13	1.13	0.19	0.00	0.15
230	7	-0.047	1.903	-0.034	-0.738	10.627	14.917	1.13	1.13	1.13	1.13	0.17	0.00	0.12
Spess.= 30.0 cm Axxinf= -- Axsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
231	1A	-0.029	-0.204	0.043	0.806	0.069	2.242	1.13	1.13	1.13	1.13	0.07	0.00	0.02
231	1B	-0.035	-0.204	-0.001	0.806	0.069	2.242	1.13	1.13	1.13	1.13	0.07	0.00	0.02
231	1C	-0.029	-0.292	0.043	1.112	0.773	3.009	1.13	1.13	1.13	1.13	0.10	0.00	0.03
231	1D	-0.035	-0.292	-0.001	1.112	0.773	3.009	1.13	1.13	1.13	1.13	0.10	0.00	0.03
231	1I	-0.036	-0.300	0.043	0.843	0.196	2.331	1.13	1.13	1.13	1.13	0.08	0.00	0.02
231	1J	-0.028	-0.300	-0.001	0.843	0.196	2.331	1.13	1.13	1.13	1.13	0.08	0.00	0.02
231	1K	-0.036	-0.196	0.043	1.076	0.793	3.028	1.13	1.13	1.13	1.13	0.10	0.00	0.03
231	1L	-0.028	-0.196	-0.001	1.076	0.793	3.028	1.13	1.13	1.13	1.13	0.10	0.00	0.03
231	2	-0.060	-0.454	-0.060	1.705	1.856	6.632	1.13	1.13	1.13	1.13	0.15	0.00	0.06
231	7	-0.040	-0.380	-0.049	1.620	2.091	6.004	1.13	1.13	1.13	1.13	0.14	0.00	0.05
Spess.= 30.0 cm Axxinf= -- Axsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
232	1A	0.026	-0.334	0.046	0.999	6.117	5.350	1.13	1.13	1.13	1.13	0.09	0.00	0.05
232	1B	0.016	-0.334	0.002	0.999	6.117	5.350	1.13	1.13	1.13	1.13	0.09	0.00	0.05
232	1C	0.026	-0.199	0.046	1.321	6.802	5.780	1.13	1.13	1.13	1.13	0.12	0.00	0.06
232	1D	0.016	-0.199	0.002	1.321	6.802	5.780	1.13	1.13	1.13	1.13	0.12	0.00	0.06
232	1I	0.026	-0.335	0.045	1.034	6.100	5.477	1.13	1.13	1.13	1.13	0.09	0.00	0.05
232	1J	0.015	-0.335	0.003	1.034	6.100	5.477	1.13	1.13	1.13	1.13	0.09	0.00	0.05
232	1K	0.026	-0.198	0.045	1.285	6.652	5.836	1.13	1.13	1.13	1.13	0.12	0.00	0.06
232	1L	0.015	-0.198	0.003	1.285	6.652	5.836	1.13	1.13	1.13	1.13	0.12	0.00	0.06
232	2	-0.037	-0.501	-0.051	2.106	10.766	12.714	1.13	1.13	1.13	1.13	0.18	0.00	0.11
232	7	-0.023	-0.448	-0.035	1.976	9.169	12.741	1.13	1.13	1.13	1.13	0.17	0.00	0.11
Spess.= 30.0 cm Axxinf= -- Axsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
233	1A	-0.015	1.031	0.043	-0.501	3.777	8.627	1.13	1.13	1.13	1.13	0.09	0.00	0.07
233	1B	-0.048	1.031	0.011	-0.501	3.777	8.627	1.13	1.13	1.13	1.13	0.09	0.00	0.07
233	1C	-0.015	1.175	0.043	-0.190	3.287	7.428	1.13	1.13	1.13	1.13	0.11	0.00	0.06
233	1D	-0.048	1.175	0.011	-0.190	3.287	7.428	1.13	1.13	1.13	1.13	0.11	0.00	0.06
233	1I	-0.018	1.058	0.045	-0.493	3.727	8.914	1.13	1.13	1.13	1.13	0.10	0.00	0.07
233	1J	-0.045	1.058	0.009	-0.493	3.727	8.914	1.13	1.13	1.13	1.13	0.10	0.00	0.07
233	1K	-0.018	1.148	0.045	-0.198	3.561	7.089	1.13	1.13	1.13	1.13	0.10	0.00	0.06
233	1L	-0.045	1.148	0.009	-0.198	3.561	7.089	1.13	1.13	1.13	1.13	0.10	0.00	0.06
233	2	-0.078	2.019	0.044	-0.672	7.605	13.736	1.13	1.13	1.13	1.13	0.18	0.00	0.11
233	7	-0.057	1.913	0.024	-0.615	8.545	11.673	1.13	1.13	1.13	1.13	0.17	0.00	0.10
Spess.= 30.0 cm Axxinf= -- Axsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
234	1A	0.030	-1.569	-0.048	-0.751	4.747	18.815	1.13	1.13	1.13	1.13	0.14	0.00	0.16
234	1B	0.021	-1.569	-0.099	-0.751	4.747	18.815	1.13	1.13	1.13	1.13	0.14	0.00	0.16
234	1C	0.030	-1.204	-0.048	-0.355	4.293	15.971	1.13	1.13	1.13	1.13	0.11	0.00	0.13
234	1D	0.021	-1.204	-0.099	-0.355	4.293	15.971	1.13	1.13	1.13	1.13	0.11	0.00	0.13
234	1I	0.032	-1.513	-0.046	-0.863	4.624	19.124	1.13	1.13	1.13	1.13	0.14	0.00	0.16
234	1J	0.019	-1.513	-0.101	-0.863	4.624	19.124	1.13	1.13	1.13	1.13	0.14	0.00	0.16
234	1K	0.032	-1.260	-0.046	-0.243	3.822	15.172	1.13	1.13	1.13	1.13	0.11	0.00	0.13
234	1L	0.019	-1.260	-0.101	-0.243	3.822	15.172	1.13	1.13	1.13	1.13	0.11	0.00	0.12
234	2	0.039	-2.825	-0.148	-1.320	11.097	38.353	1.13	1.13	1.13	1.13	0.25	0.00	0.32
234	7	0.015	-2.416	-0.124	-0.887	6.453	32.369	1.13	1.13	1.13	1.13	0.21	0.00	0.27
Spess.= 30.0 cm Axxinf= -- Axsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
235	1A	0.026	-1.133	-0.043	0.152	10.029	19.825	1.13	1.13	1.13	1.13	0.10	0.00	0.16
235	1B	0.010	-1.133	-0.095	0.152	10.029	19.825	1.13	1.13	1.13	1.13	0.10	0.00	0.16
235	1C	0.026	-0.863	-0.043	0.430	8.391	17.610	1.13	1.13	1.13	1.13	0.08	0.00	0.15
235	1D	0.010	-0.863	-0.095	0.430	8.391	17.610	1.13	1.13	1.13	1.13	0.08	0.00	0.15
235	1I	0.026	-1.119	-0.042	0.086	9.629	20.078	1.13	1.13	1.13	1.13	0.10	0.00	0.16

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

235 1J	0.010	-1.119	-0.097	0.086	9.629	20.078	1.13	1.13	1.13	1.13	0.10	0.00	0.16
235 1K	0.026	-0.877	-0.042	0.496	8.695	15.916	1.13	1.13	1.13	1.13	0.08	0.00	0.13
235 1L	0.010	-0.877	-0.097	0.496	8.695	15.916	1.13	1.13	1.13	1.13	0.08	0.00	0.13
235 2	0.020	-2.000	-0.139	0.399	17.170	38.753	1.13	1.13	1.13	1.13	0.17	0.00	0.32
235 7	0.006	-1.687	-0.120	0.511	14.840	33.320	1.13	1.13	1.13	1.13	0.15	0.00	0.27
Spess.=	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --					(e arm. base nelle due direz.)			
236 1A	-0.045	-0.487	0.032	-1.612	12.794	5.474	1.13	1.13	1.13	1.13	0.15	0.00	0.11
236 1B	-0.092	-0.487	-0.002	-1.612	12.794	5.474	1.13	1.13	1.13	1.13	0.15	0.00	0.11
236 1C	-0.045	-0.251	0.032	-1.116	12.263	4.601	1.13	1.13	1.13	1.13	0.10	0.00	0.10
236 1D	-0.092	-0.251	-0.002	-1.116	12.263	4.601	1.13	1.13	1.13	1.13	0.10	0.00	0.10
236 1I	-0.041	-0.580	0.033	-1.709	12.767	5.177	1.13	1.13	1.13	1.13	0.16	0.00	0.11
236 1J	-0.095	-0.580	-0.003	-1.709	12.767	5.177	1.13	1.13	1.13	1.13	0.16	0.00	0.11
236 1K	-0.041	-0.158	0.033	-1.020	12.103	4.782	1.13	1.13	1.13	1.13	0.09	0.00	0.10
236 1L	-0.095	-0.158	-0.003	-1.020	12.103	4.782	1.13	1.13	1.13	1.13	0.09	0.00	0.10
236 2	-0.142	-0.921	-0.023	-2.754	26.594	8.594	1.13	1.13	1.13	1.13	0.24	0.00	0.22
236 7	-0.124	-0.566	-0.017	-2.268	19.733	8.279	1.13	1.13	1.13	1.13	0.20	0.00	0.16
Spess.=	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --					(e arm. base nelle due direz.)			
237 1A	0.003	-0.747	-0.007	-0.245	1.215	0.487	1.13	1.13	1.13	1.13	0.07	0.00	0.01
237 1B	-0.042	-0.747	-0.045	-0.245	1.215	0.487	1.13	1.13	1.13	1.13	0.07	0.00	0.01
237 1C	0.003	-0.470	-0.007	-0.020	0.208	1.241	1.13	1.13	1.13	1.13	0.04	0.00	0.01
237 1D	-0.042	-0.470	-0.045	-0.020	0.208	1.241	1.13	1.13	1.13	1.13	0.04	0.00	0.01
237 1I	0.004	-0.748	-0.001	-0.255	1.284	0.387	1.13	1.13	1.13	1.13	0.07	0.00	0.01
237 1J	-0.044	-0.748	-0.050	-0.255	1.284	0.387	1.13	1.13	1.13	1.13	0.07	0.00	0.01
237 1K	0.004	-0.469	-0.001	-0.010	0.006	1.286	1.13	1.13	1.13	1.13	0.04	0.00	0.01
237 1L	-0.044	-0.469	-0.050	-0.010	0.006	1.286	1.13	1.13	1.13	1.13	0.04	0.00	0.01
237 2	-0.049	-1.309	-0.046	-0.272	1.469	0.106	1.13	1.13	1.13	1.13	0.11	0.00	0.01
237 7	-0.065	-1.121	-0.032	-0.230	1.632	0.551	1.13	1.13	1.13	1.13	0.10	0.00	0.01
Spess.=	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --					(e arm. base nelle due direz.)			
238 1A	-0.032	-0.835	0.040	-0.435	1.795	8.800	1.13	1.13	1.13	1.13	0.08	0.00	0.07
238 1B	-0.041	-0.835	-0.021	-0.435	1.795	8.800	1.13	1.13	1.13	1.13	0.08	0.00	0.07
238 1C	-0.032	-0.664	0.040	-0.057	1.747	4.413	1.13	1.13	1.13	1.13	0.06	0.00	0.04
238 1D	-0.041	-0.664	-0.021	-0.057	1.747	4.413	1.13	1.13	1.13	1.13	0.06	0.00	0.04
238 1I	-0.037	-0.850	0.044	-0.436	1.579	8.930	1.13	1.13	1.13	1.13	0.08	0.00	0.07
238 1J	-0.035	-0.850	-0.025	-0.436	1.579	8.930	1.13	1.13	1.13	1.13	0.08	0.00	0.07
238 1K	-0.037	-0.649	0.044	-0.056	1.818	3.899	1.13	1.13	1.13	1.13	0.06	0.00	0.03
238 1L	-0.035	-0.649	-0.025	-0.056	1.818	3.899	1.13	1.13	1.13	1.13	0.06	0.00	0.03
238 2	-0.074	-1.619	-0.012	-0.508	3.278	12.571	1.13	1.13	1.13	1.13	0.14	0.00	0.10
238 7	-0.072	-1.348	-0.008	-0.433	3.992	10.970	1.13	1.13	1.13	1.13	0.12	0.00	0.09
Spess.=	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --					(e arm. base nelle due direz.)			
239 1A	0.016	-0.182	-0.012	-0.793	7.027	8.707	1.13	1.13	1.13	1.13	0.07	0.00	0.07
239 1B	0.002	-0.182	-0.071	-0.793	7.027	8.707	1.13	1.13	1.13	1.13	0.07	0.00	0.07
239 1C	0.016	-0.063	-0.012	-0.438	5.927	7.982	1.13	1.13	1.13	1.13	0.04	0.00	0.07
239 1D	0.002	-0.063	-0.071	-0.438	5.927	7.982	1.13	1.13	1.13	1.13	0.04	0.00	0.07
239 1I	0.015	-0.194	-0.008	-0.793	7.400	8.671	1.13	1.13	1.13	1.13	0.07	0.00	0.07
239 1J	0.003	-0.194	-0.075	-0.793	7.400	8.671	1.13	1.13	1.13	1.13	0.07	0.00	0.07
239 1K	0.015	-0.051	-0.008	-0.438	5.885	8.027	1.13	1.13	1.13	1.13	0.04	0.00	0.07
239 1L	0.003	-0.051	-0.075	-0.438	5.885	8.027	1.13	1.13	1.13	1.13	0.04	0.00	0.07
239 2	0.007	-0.271	-0.082	-1.357	15.257	20.859	1.13	1.13	1.13	1.13	0.12	0.00	0.17
239 7	-0.014	-0.251	-0.082	-1.113	12.298	16.235	1.13	1.13	1.13	1.13	0.10	0.00	0.14
Spess.=	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --					(e arm. base nelle due direz.)			
240 1A	-0.009	-0.640	-0.037	0.346	5.323	5.674	1.13	1.13	1.13	1.13	0.06	0.00	0.05
240 1B	-0.042	-0.640	-0.072	0.346	5.323	5.674	1.13	1.13	1.13	1.13	0.06	0.00	0.05
240 1C	-0.009	-0.320	-0.037	0.527	3.123	5.042	1.13	1.13	1.13	1.13	0.05	0.00	0.04
240 1D	-0.042	-0.320	-0.072	0.527	3.123	5.042	1.13	1.13	1.13	1.13	0.05	0.00	0.04
240 1I	-0.008	-0.626	-0.035	0.342	5.050	5.742	1.13	1.13	1.13	1.13	0.06	0.00	0.05
240 1J	-0.043	-0.626	-0.073	0.342	5.050	5.742	1.13	1.13	1.13	1.13	0.06	0.00	0.05
240 1K	-0.008	-0.334	-0.035	0.532	3.348	4.791	1.13	1.13	1.13	1.13	0.05	0.00	0.04
240 1L	-0.043	-0.334	-0.073	0.532	3.348	4.791	1.13	1.13	1.13	1.13	0.05	0.00	0.04
240 2	-0.049	-0.922	-0.119	0.694	7.501	10.183	1.13	1.13	1.13	1.13	0.08	0.00	0.08
240 7	-0.035	-0.821	-0.102	0.792	6.660	9.305	1.13	1.13	1.13	1.13	0.07	0.00	0.08
Spess.=	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --					(e arm. base nelle due direz.)			
241 1A	-0.060	0.417	0.057	-0.372	8.773	4.783	1.13	1.13	1.13	1.13	0.04	0.00	0.07
241 1B	-0.054	0.417	-0.000	-0.372	8.773	4.783	1.13	1.13	1.13	1.13	0.04	0.00	0.07
241 1C	-0.060	0.457	0.057	-0.054	7.494	6.554	1.13	1.13	1.13	1.13	0.04	0.00	0.06
241 1D	-0.054	0.457	-0.000	-0.054	7.494	6.554	1.13	1.13	1.13	1.13	0.04	0.00	0.06
241 1I	-0.062	0.428	0.059	-0.366	8.775	4.861	1.13	1.13	1.13	1.13	0.04	0.00	0.07
241 1J	-0.053	0.428	-0.002	-0.366	8.775	4.861	1.13	1.13	1.13	1.13	0.04	0.00	0.07
241 1K	-0.062	0.447	0.059	-0.059	7.632	6.292	1.13	1.13	1.13	1.13	0.04	0.00	0.06
241 1L	-0.053	0.447	-0.002	-0.059	7.632	6.292	1.13	1.13	1.13	1.13	0.04	0.00	0.06
241 2	-0.121	0.719	0.047	-0.418	18.281	10.333	1.13	1.13	1.13	1.13	0.06	0.00	0.15
241 7	-0.097	0.848	0.028	-0.411	18.806	11.206	1.13	1.13	1.13	1.13	0.07	0.00	0.16
Spess.=	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --					(e arm. base nelle due direz.)			
242 1A	0.047	-0.462	-0.036	0.648	0.190	13.846	1.13	1.13	1.13	1.13	0.06	0.00	0.12
242 1B	0.024	-0.462	-0.088	0.648	0.190	13.846	1.13	1.13	1.13	1.13	0.06	0.00	0.11
242 1C	0.047	-0.222	-0.036	0.881	1.575	13.849	1.13	1.13	1.13	1.13	0.08	0.00	0.12
242 1D	0.024	-0.222	-0.088	0.881	1.575	13.849	1.13	1.13	1.13	1.13	0.08	0.00	0.12
242 1I	0.049	-0.449	-0.036	0.661	0.234	14.165	1.13	1.13	1.13	1.13	0.06	0.00	0.12
242 1J	0.021	-0.449	-0.088	0.661	0.234	14.165	1.13	1.13	1.13	1.13	0.06	0.00	0.12
242 1K	0.049	-0.235	-0.036	0.868	1.685	13.442	1.13	1.13	1.13	1.13	0.08	0.00	0.11
242 1L	0.021	-0.235	-0.088	0.868	1.685	13.442	1.13	1.13	1.13	1.13	0.08	0.00	0.11
242 2	0.052	-0.647	-0.125	1.337	0.827	26.885	1.13	1.13	1.13	1.13	0.12	0.00	0.22
242 7	0.025	-0.577	-0.093	1.330	1.826	25.017	1.13	1.13	1.13	1.13	0.12	0.00	0.21
Spess.=	30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --					(e arm. base nelle due direz.)			
243 1A	0.102	-0.197	0.065	-1.409	25.632	15.398	1.13	1.13	1.13	1.13	0.13	0.00	0.21
243 1B	0.023	-0.197	-0.004	-1.409	25.632	15.398	1.13	1.13	1.13	1.13	0.13	0.00	0.21
243 1C	0.102	-0.060	0.065	-0.644	17.009	10.399	1.13	1.13	1.13	1.13	0.06	0.00	0.14
243 1D	0.023	-0.060	-0.004	-0.644	17.009	10.399	1.13	1.13	1.13	1.13	0.06	0.00	0.14
243 1I	0.093	-0.221	0.055	-1.580	25.790	18.174	1.13	1.13	1.13	1.13	0.14	0.00	0.22
243 1J	0.031	-0.221	0.006	-1.580	25.790	18.174	1.13	1.13	1.13	1.13	0.14	0.00	0.22



# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

243	1K	0.093	-0.037	0.055	-0.473	14.668	8.763	1.13	1.13	1.13	1.13	0.04	0.00	0.12
243	1L	0.031	-0.037	0.006	-0.473	14.668	8.763	1.13	1.13	1.13	1.13	0.04	0.00	0.12
243	2	0.082	-0.210	0.046	-1.756	36.785	22.102	1.13	1.13	1.13	1.13	0.15	0.00	0.31
243	7	0.043	-0.228	0.011	-0.928	22.371	7.405	1.13	1.13	1.13	1.13	0.08	0.00	0.19
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --			(e arm. base nelle due direz.)					
244	1A	0.104	-0.587	0.084	-1.380	14.665	12.001	1.13	1.13	1.13	1.13	0.13	0.00	0.12
244	1B	0.033	-0.587	-0.013	-1.380	14.665	12.001	1.13	1.13	1.13	1.13	0.13	0.00	0.12
244	1C	0.104	-0.307	0.084	-0.623	7.336	4.886	1.13	1.13	1.13	1.13	0.06	0.00	0.06
244	1D	0.033	-0.307	-0.013	-0.623	7.336	4.886	1.13	1.13	1.13	1.13	0.06	0.00	0.06
244	1I	0.097	-0.560	0.070	-1.505	16.056	13.671	1.13	1.13	1.13	1.13	0.14	0.00	0.13
244	1J	0.040	-0.560	0.001	-1.505	16.056	13.671	1.13	1.13	1.13	1.13	0.14	0.00	0.13
244	1K	0.097	-0.334	0.070	-0.498	6.408	4.229	1.13	1.13	1.13	1.13	0.05	0.00	0.05
244	1L	0.040	-0.334	0.001	-0.498	6.408	4.229	1.13	1.13	1.13	1.13	0.05	0.00	0.05
244	2	0.092	-0.755	0.055	-1.740	18.833	11.727	1.13	1.13	1.13	1.13	0.15	0.00	0.16
244	7	0.052	-0.664	0.016	-0.888	11.308	7.780	1.13	1.13	1.13	1.13	0.08	0.00	0.09
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --			(e arm. base nelle due direz.)					
245	1A	0.115	-0.256	0.042	-1.265	4.047	14.466	1.13	1.13	1.13	1.13	0.12	0.00	0.12
245	1B	0.015	-0.256	0.024	-1.265	4.047	14.466	1.13	1.13	1.13	1.13	0.12	0.00	0.12
245	1C	0.115	-0.038	0.042	-0.582	1.488	5.246	1.13	1.13	1.13	1.13	0.05	0.00	0.04
245	1D	0.015	-0.038	0.024	-0.582	1.488	5.246	1.13	1.13	1.13	1.13	0.05	0.00	0.04
245	1I	0.102	-0.243	0.041	-1.407	4.831	16.706	1.13	1.13	1.13	1.13	0.13	0.00	0.14
245	1J	0.027	-0.243	0.026	-1.407	4.831	16.706	1.13	1.13	1.13	1.13	0.13	0.00	0.14
245	1K	0.102	-0.051	0.041	-0.441	0.648	2.829	1.13	1.13	1.13	1.13	0.04	0.00	0.02
245	1L	0.027	-0.051	0.026	-0.441	0.648	2.829	1.13	1.13	1.13	1.13	0.04	0.00	0.02
245	2	0.086	-0.245	0.051	-1.592	7.056	14.914	1.13	1.13	1.13	1.13	0.14	0.00	0.12
245	7	0.046	-0.255	0.014	-0.800	1.297	5.036	1.13	1.13	1.13	1.13	0.07	0.00	0.04
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --			(e arm. base nelle due direz.)					
246	1A	0.025	-0.182	0.010	1.006	1.491	5.565	1.13	1.13	1.13	1.13	0.09	0.00	0.05
246	1B	0.005	-0.182	-0.044	1.006	1.491	5.565	1.13	1.13	1.13	1.13	0.09	0.00	0.05
246	1C	0.025	-0.049	0.010	1.205	1.561	5.396	1.13	1.13	1.13	1.13	0.11	0.00	0.05
246	1D	0.005	-0.049	-0.044	1.205	1.561	5.396	1.13	1.13	1.13	1.13	0.11	0.00	0.05
246	1I	0.027	-0.196	0.010	1.032	1.842	6.100	1.13	1.13	1.13	1.13	0.09	0.00	0.05
246	1J	0.003	-0.196	-0.044	1.032	1.842	6.100	1.13	1.13	1.13	1.13	0.09	0.00	0.05
246	1K	0.027	-0.035	0.010	1.179	1.578	5.643	1.13	1.13	1.13	1.13	0.11	0.00	0.05
246	1L	0.003	-0.035	-0.044	1.179	1.578	5.643	1.13	1.13	1.13	1.13	0.11	0.00	0.05
246	2	0.020	-0.222	-0.053	1.993	0.352	5.670	1.13	1.13	1.13	1.13	0.17	0.00	0.05
246	7	-0.008	-0.247	-0.047	1.763	0.385	5.372	1.13	1.13	1.13	1.13	0.15	0.00	0.04
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --			(e arm. base nelle due direz.)					
247	1A	-0.003	0.877	0.018	-0.208	0.956	2.758	1.13	1.13	1.13	1.13	0.08	0.00	0.02
247	1B	-0.058	0.877	0.009	-0.208	0.956	2.758	1.13	1.13	1.13	1.13	0.08	0.00	0.02
247	1C	-0.003	1.107	0.018	-0.117	0.678	2.762	1.13	1.13	1.13	1.13	0.10	0.00	0.02
247	1D	-0.058	1.107	0.009	-0.117	0.678	2.762	1.13	1.13	1.13	1.13	0.10	0.00	0.02
247	1I	-0.001	0.884	0.019	-0.208	0.494	2.792	1.13	1.13	1.13	1.13	0.08	0.00	0.02
247	1J	-0.060	0.884	0.009	-0.208	0.494	2.792	1.13	1.13	1.13	1.13	0.08	0.00	0.02
247	1K	-0.001	1.100	0.019	-0.118	0.170	2.821	1.13	1.13	1.13	1.13	0.10	0.00	0.02
247	1L	-0.060	1.100	0.009	-0.118	0.170	2.821	1.13	1.13	1.13	1.13	0.10	0.00	0.02
247	2	-0.077	1.777	0.018	-0.320	4.879	4.807	1.13	1.13	1.13	1.13	0.15	0.00	0.04
247	7	-0.067	1.502	-0.009	-0.232	4.180	4.951	1.13	1.13	1.13	1.13	0.13	0.00	0.04
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --			(e arm. base nelle due direz.)					
248	1A	-0.016	-0.355	0.008	0.972	9.574	2.479	1.13	1.13	1.13	1.13	0.09	0.00	0.08
248	1B	-0.027	-0.355	-0.046	0.972	9.574	2.479	1.13	1.13	1.13	1.13	0.09	0.00	0.08
248	1C	-0.016	-0.272	0.008	1.217	10.796	2.636	1.13	1.13	1.13	1.13	0.11	0.00	0.09
248	1D	-0.027	-0.272	-0.046	1.217	10.796	2.636	1.13	1.13	1.13	1.13	0.11	0.00	0.09
248	1I	-0.015	-0.364	0.009	0.983	9.762	2.439	1.13	1.13	1.13	1.13	0.09	0.00	0.08
248	1J	-0.028	-0.364	-0.047	0.983	9.762	2.439	1.13	1.13	1.13	1.13	0.09	0.00	0.08
248	1K	-0.015	-0.264	0.009	1.206	10.649	2.868	1.13	1.13	1.13	1.13	0.11	0.00	0.09
248	1L	-0.028	-0.264	-0.047	1.206	10.649	2.868	1.13	1.13	1.13	1.13	0.11	0.00	0.09
248	2	-0.042	-0.605	-0.061	1.968	18.333	3.581	1.13	1.13	1.13	1.13	0.17	0.00	0.15
248	7	-0.025	-0.515	-0.061	1.719	15.910	4.323	1.13	1.13	1.13	1.13	0.15	0.00	0.13
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --			(e arm. base nelle due direz.)					
249	1A	-0.004	-0.114	0.031	-1.063	19.089	11.152	1.13	1.13	1.13	1.13	0.10	0.00	0.16
249	1B	-0.039	-0.114	0.012	-1.063	19.089	11.152	1.13	1.13	1.13	1.13	0.10	0.00	0.16
249	1C	-0.004	-0.024	0.031	-0.658	16.655	9.591	1.13	1.13	1.13	1.13	0.06	0.00	0.14
249	1D	-0.039	-0.024	0.012	-0.658	16.655	9.591	1.13	1.13	1.13	1.13	0.06	0.00	0.14
249	1I	-0.002	-0.106	0.035	-1.042	18.448	11.319	1.13	1.13	1.13	1.13	0.09	0.00	0.15
249	1J	-0.041	-0.106	0.008	-1.042	18.448	11.319	1.13	1.13	1.13	1.13	0.09	0.00	0.15
249	1K	-0.002	-0.032	0.035	-0.679	16.417	9.383	1.13	1.13	1.13	1.13	0.06	0.00	0.14
249	1L	-0.041	-0.032	0.008	-0.679	16.417	9.383	1.13	1.13	1.13	1.13	0.06	0.00	0.14
249	2	-0.043	-0.143	0.036	-1.678	32.755	20.327	1.13	1.13	1.13	1.13	0.15	0.00	0.27
249	7	-0.043	-0.158	0.019	-1.561	31.574	17.531	1.13	1.13	1.13	1.13	0.14	0.00	0.26
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --			(e arm. base nelle due direz.)					
250	1A	0.038	-1.102	-0.008	-0.501	3.169	4.604	1.13	1.13	1.13	1.13	0.10	0.00	0.04
250	1B	0.022	-1.102	-0.055	-0.501	3.169	4.604	1.13	1.13	1.13	1.13	0.10	0.00	0.04
250	1C	0.038	-0.756	-0.008	-0.113	0.829	0.810	1.13	1.13	1.13	1.13	0.07	0.00	0.01
250	1D	0.022	-0.756	-0.055	-0.113	0.829	0.810	1.13	1.13	1.13	1.13	0.07	0.00	0.01
250	1I	0.038	-1.069	-0.002	-0.496	3.541	4.421	1.13	1.13	1.13	1.13	0.10	0.00	0.04
250	1J	0.022	-1.069	-0.062	-0.496	3.541	4.421	1.13	1.13	1.13	1.13	0.10	0.00	0.04
250	1K	0.038	-0.789	-0.002	-0.119	0.512	0.750	1.13	1.13	1.13	1.13	0.07	0.00	0.01
250	1L	0.022	-0.789	-0.062	-0.119	0.512	0.750	1.13	1.13	1.13	1.13	0.07	0.00	0.01
250	2	0.048	-1.822	-0.057	-0.611	4.413	5.500	1.13	1.13	1.13	1.13	0.16	0.00	0.05
250	7	0.016	-1.689	-0.043	-0.510	4.235	4.801	1.13	1.13	1.13	1.13	0.15	0.00	0.04
Spess.=		30.0 cm	Axxinf= --	Axxsup= --	Ayyinf= --	Ayysup= --			(e arm. base nelle due direz.)					
251	1A	0.000	-0.137	0.032	-0.962	4.317	11.026	1.13	1.13	1.13	1.13	0.09	0.00	0.09
251	1B	-0.042	-0.137	0.007	-0.962	4.317	11.026	1.13	1.13	1.13	1.13	0.09	0.00	0.09
251	1C	0.000	-0.067	0.032	-0.584	2.842	6.561	1.13	1.13	1.13	1.13	0.05	0.00	0.05
251	1D	-0.042	-0.067	0.007	-0.584	2.842	6.561	1.13	1.13	1.13	1.13	0.05	0.00	0.05
251	1I	0.006	-0.122	0.037	-0.956	4.345	10.397	1.13	1.13	1.13	1.13	0.09	0.00	0.09
251	1J	-0.047	-0.122	0.002	-0.956	4.345	10.397	1.13	1.13	1.13	1.13	0.09	0.00	0.09
251</														

# Relazione di calcolo delle opere strutturali

## Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

251	1L	-0.047	-0.082	0.002	-0.589	3.009	6.756	1.13	1.13	1.13	1.13	0.05	0.00	0.06
251	2	-0.041	-0.207	0.032	-1.515	6.848	15.646	1.13	1.13	1.13	1.13	0.13	0.00	0.13
251	7	-0.042	-0.220	0.015	-1.404	5.783	14.639	1.13	1.13	1.13	1.13	0.12	0.00	0.12
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
252	1A	-0.029	0.411	0.021	-0.560	14.854	0.194	1.13	1.13	1.13	1.13	0.05	0.00	0.12
252	1B	-0.082	0.411	-0.001	-0.560	14.854	0.194	1.13	1.13	1.13	1.13	0.05	0.00	0.12
252	1C	-0.029	0.572	0.021	-0.325	15.787	1.161	1.13	1.13	1.13	1.13	0.05	0.00	0.13
252	1D	-0.082	0.572	-0.001	-0.325	15.787	1.161	1.13	1.13	1.13	1.13	0.05	0.00	0.13
252	1I	-0.026	0.389	0.021	-0.591	15.516	0.176	1.13	1.13	1.13	1.13	0.05	0.00	0.13
252	1J	-0.085	0.389	-0.001	-0.591	15.516	0.176	1.13	1.13	1.13	1.13	0.05	0.00	0.13
252	1K	-0.026	0.594	0.021	-0.294	15.644	1.279	1.13	1.13	1.13	1.13	0.05	0.00	0.13
252	1L	-0.085	0.594	-0.001	-0.294	15.644	1.279	1.13	1.13	1.13	1.13	0.05	0.00	0.13
252	2	-0.121	0.797	-0.018	-0.886	29.113	0.460	1.13	1.13	1.13	1.13	0.08	0.00	0.24
252	7	-0.106	0.737	-0.013	-0.717	23.728	1.545	1.13	1.13	1.13	1.13	0.06	0.00	0.20
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
253	1A	-0.027	0.140	-0.004	-0.566	13.678	9.235	1.13	1.13	1.13	1.13	0.05	0.00	0.11
253	1B	-0.089	0.140	-0.015	-0.566	13.678	9.235	1.13	1.13	1.13	1.13	0.05	0.00	0.11
253	1C	-0.027	0.304	-0.004	-0.366	13.638	7.097	1.13	1.13	1.13	1.13	0.03	0.00	0.11
253	1D	-0.089	0.304	-0.015	-0.366	13.638	7.097	1.13	1.13	1.13	1.13	0.03	0.00	0.11
253	1I	-0.023	0.097	-0.003	-0.582	13.022	9.327	1.13	1.13	1.13	1.13	0.05	0.00	0.11
253	1J	-0.092	0.097	-0.015	-0.582	13.022	9.327	1.13	1.13	1.13	1.13	0.05	0.00	0.10
253	1K	-0.023	0.348	-0.003	-0.350	13.425	6.578	1.13	1.13	1.13	1.13	0.03	0.00	0.11
253	1L	-0.092	0.348	-0.015	-0.350	13.425	6.578	1.13	1.13	1.13	1.13	0.03	0.00	0.11
253	2	-0.123	0.261	-0.018	-0.936	26.714	17.850	1.13	1.13	1.13	1.13	0.08	0.00	0.22
253	7	-0.109	0.301	-0.013	-0.764	23.105	12.808	1.13	1.13	1.13	1.13	0.07	0.00	0.19
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
254	1A	-0.019	-0.745	0.042	-0.370	0.124	4.421	1.13	1.13	1.13	1.13	0.07	0.00	0.04
254	1B	-0.068	-0.745	0.024	-0.370	0.124	4.421	1.13	1.13	1.13	1.13	0.07	0.00	0.04
254	1C	-0.019	-0.511	0.042	-0.220	0.641	2.670	1.13	1.13	1.13	1.13	0.05	0.00	0.02
254	1D	-0.068	-0.511	0.024	-0.220	0.641	2.670	1.13	1.13	1.13	1.13	0.05	0.00	0.02
254	1I	-0.015	-0.727	0.045	-0.408	0.388	3.658	1.13	1.13	1.13	1.13	0.07	0.00	0.03
254	1J	-0.072	-0.727	0.021	-0.408	0.388	3.658	1.13	1.13	1.13	1.13	0.07	0.00	0.03
254	1K	-0.015	-0.528	0.045	-0.182	0.436	1.493	1.13	1.13	1.13	1.13	0.05	0.00	0.01
254	1L	-0.072	-0.528	0.021	-0.182	0.436	1.493	1.13	1.13	1.13	1.13	0.05	0.00	0.01
254	2	-0.087	-1.297	0.058	-0.558	1.670	6.684	1.13	1.13	1.13	1.13	0.11	0.00	0.06
254	7	-0.079	-1.047	0.039	-0.442	0.222	5.649	1.13	1.13	1.13	1.13	0.09	0.00	0.05
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
255	1A	0.049	-0.496	-0.032	-0.916	3.920	6.366	1.13	1.13	1.13	1.13	0.08	0.00	0.05
255	1B	0.039	-0.496	-0.092	-0.916	3.920	6.366	1.13	1.13	1.13	1.13	0.08	0.00	0.05
255	1C	0.049	-0.282	-0.032	-0.639	3.646	6.809	1.13	1.13	1.13	1.13	0.06	0.00	0.06
255	1D	0.039	-0.282	-0.092	-0.639	3.646	6.809	1.13	1.13	1.13	1.13	0.06	0.00	0.06
255	1I	0.048	-0.467	-0.027	-0.941	4.525	6.981	1.13	1.13	1.13	1.13	0.09	0.00	0.06
255	1J	0.040	-0.467	-0.097	-0.941	4.525	6.981	1.13	1.13	1.13	1.13	0.08	0.00	0.06
255	1K	0.048	-0.312	-0.027	-0.614	3.384	7.964	1.13	1.13	1.13	1.13	0.06	0.00	0.07
255	1L	0.040	-0.312	-0.097	-0.614	3.384	7.964	1.13	1.13	1.13	1.13	0.05	0.00	0.07
255	2	0.074	-0.781	-0.118	-1.628	7.718	8.997	1.13	1.13	1.13	1.13	0.14	0.00	0.07
255	7	0.041	-0.763	-0.095	-1.295	6.959	9.528	1.13	1.13	1.13	1.13	0.11	0.00	0.08
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
256	1A	-0.017	-0.852	0.045	-0.678	6.557	7.523	1.13	1.13	1.13	1.13	0.08	0.00	0.06
256	1B	-0.065	-0.852	0.019	-0.678	6.557	7.523	1.13	1.13	1.13	1.13	0.08	0.00	0.06
256	1C	-0.017	-0.653	0.045	-0.393	7.098	3.605	1.13	1.13	1.13	1.13	0.06	0.00	0.06
256	1D	-0.065	-0.653	0.019	-0.393	7.098	3.605	1.13	1.13	1.13	1.13	0.06	0.00	0.06
256	1I	-0.012	-0.843	0.049	-0.701	6.877	6.638	1.13	1.13	1.13	1.13	0.08	0.00	0.06
256	1J	-0.069	-0.843	0.015	-0.701	6.877	6.638	1.13	1.13	1.13	1.13	0.08	0.00	0.06
256	1K	-0.012	-0.661	0.049	-0.371	6.983	4.537	1.13	1.13	1.13	1.13	0.06	0.00	0.06
256	1L	-0.069	-0.661	0.015	-0.371	6.983	4.537	1.13	1.13	1.13	1.13	0.06	0.00	0.06
256	2	-0.082	-1.542	0.056	-1.035	15.640	8.010	1.13	1.13	1.13	1.13	0.13	0.00	0.13
256	7	-0.075	-1.293	0.037	-0.866	12.021	8.213	1.13	1.13	1.13	1.13	0.11	0.00	0.10
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
257	1A	0.037	-0.216	0.057	1.126	16.099	3.725	1.13	1.13	1.13	1.13	0.10	0.00	0.13
257	1B	0.019	-0.216	0.003	1.126	16.099	3.725	1.13	1.13	1.13	1.13	0.10	0.00	0.13
257	1C	0.037	-0.082	0.057	1.405	17.827	4.691	1.13	1.13	1.13	1.13	0.13	0.00	0.15
257	1D	0.019	-0.082	0.003	1.405	17.827	4.691	1.13	1.13	1.13	1.13	0.13	0.00	0.15
257	1I	0.036	-0.220	0.057	1.160	16.392	4.126	1.13	1.13	1.13	1.13	0.11	0.00	0.14
257	1J	0.019	-0.220	0.003	1.160	16.392	4.126	1.13	1.13	1.13	1.13	0.11	0.00	0.14
257	1K	0.036	-0.078	0.057	1.372	17.142	4.443	1.13	1.13	1.13	1.13	0.13	0.00	0.14
257	1L	0.019	-0.078	0.003	1.372	17.142	4.443	1.13	1.13	1.13	1.13	0.12	0.00	0.14
257	2	0.040	-0.276	0.027	2.294	31.514	6.851	1.13	1.13	1.13	1.13	0.20	0.00	0.26
257	7	0.012	-0.216	0.009	1.903	27.585	2.062	1.13	1.13	1.13	1.13	0.17	0.00	0.23
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
258	1A	0.052	1.134	0.023	-0.246	2.984	13.589	1.13	1.13	1.13	1.13	0.10	0.00	0.11
258	1B	-0.002	1.134	-0.001	-0.246	2.984	13.589	1.13	1.13	1.13	1.13	0.10	0.00	0.11
258	1C	0.052	1.356	0.023	-0.076	2.929	14.067	1.13	1.13	1.13	1.13	0.12	0.00	0.12
258	1D	-0.002	1.356	-0.001	-0.076	2.929	14.067	1.13	1.13	1.13	1.13	0.12	0.00	0.12
258	1I	0.052	1.164	0.023	-0.251	2.974	13.970	1.13	1.13	1.13	1.13	0.11	0.00	0.12
258	1J	-0.003	1.164	-0.000	-0.251	2.974	13.970	1.13	1.13	1.13	1.13	0.11	0.00	0.12
258	1K	0.052	1.326	0.023	-0.071	2.891	13.562	1.13	1.13	1.13	1.13	0.12	0.00	0.11
258	1L	-0.003	1.326	-0.000	-0.071	2.891	13.562	1.13	1.13	1.13	1.13	0.12	0.00	0.11
258	2	-0.019	2.258	-0.020	-0.302	6.445	25.989	1.13	1.13	1.13	1.13	0.20	0.00	0.22
258	7	-0.022	1.941	-0.009	-0.288	3.427	23.024	1.13	1.13	1.13	1.13	0.17	0.00	0.19
Spess.= 30.0 cm Axxinf= -- Axxsup= -- Ayyinf= -- Ayysup= -- (e arm. base nelle due direz.)														
259	1A	0.047	1.116	0.033	-0.255	7.077								

## Relazione di calcolo delle opere strutturali

### Riqualificazione della Residenza per il Trattamento Riabilitativo dell'Ospedale di Piacenza - CORPO 10

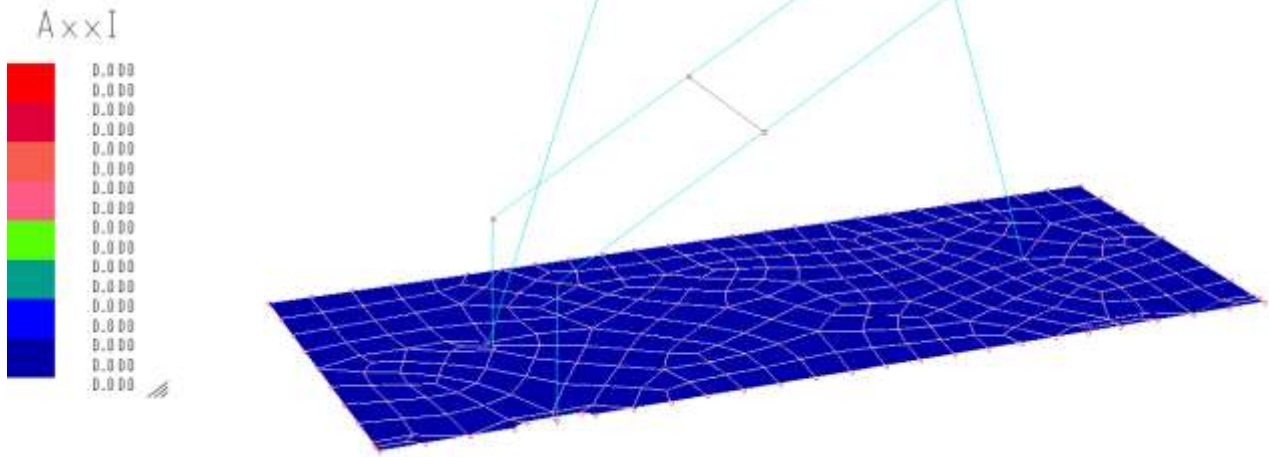
259	2	-0.027	2.211	0.028	-0.309	11.721	21.602	1.13	1.13	1.13	1.13	0.19	0.00	0.18
259	7	-0.022	1.945	0.008	-0.327	11.365	17.309	1.13	1.13	1.13	1.13	0.17	0.00	0.14
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayysup= --	(e arm. base nelle due direz.)					
260	1A	0.019	-0.710	-0.033	0.493	9.244	17.951	1.13	1.13	1.13	1.13	0.06	0.00	0.15
260	1B	0.012	-0.710	-0.083	0.493	9.244	17.951	1.13	1.13	1.13	1.13	0.06	0.00	0.15
260	1C	0.019	-0.541	-0.033	0.798	9.031	16.369	1.13	1.13	1.13	1.13	0.07	0.00	0.14
260	1D	0.012	-0.541	-0.083	0.798	9.031	16.369	1.13	1.13	1.13	1.13	0.07	0.00	0.14
260	1I	0.019	-0.697	-0.031	0.457	9.809	18.575	1.13	1.13	1.13	1.13	0.06	0.00	0.15
260	1J	0.012	-0.697	-0.085	0.457	9.809	18.575	1.13	1.13	1.13	1.13	0.06	0.00	0.15
260	1K	0.019	-0.554	-0.031	0.834	9.732	15.737	1.13	1.13	1.13	1.13	0.08	0.00	0.13
260	1L	0.012	-0.554	-0.085	0.834	9.732	15.737	1.13	1.13	1.13	1.13	0.07	0.00	0.13
260	2	0.022	-1.239	-0.127	1.101	15.233	33.412	1.13	1.13	1.13	1.13	0.11	0.00	0.28
260	7	-0.016	-1.077	-0.107	1.091	11.596	29.491	1.13	1.13	1.13	1.13	0.09	0.00	0.25
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayysup= --	(e arm. base nelle due direz.)					
261	1A	0.025	-0.556	-0.020	0.832	13.770	16.762	1.13	1.13	1.13	1.13	0.08	0.00	0.14
261	1B	0.008	-0.556	-0.071	0.832	13.770	16.762	1.13	1.13	1.13	1.13	0.07	0.00	0.14
261	1C	0.025	-0.362	-0.020	1.044	13.507	16.603	1.13	1.13	1.13	1.13	0.09	0.00	0.14
261	1D	0.008	-0.362	-0.071	1.044	13.507	16.603	1.13	1.13	1.13	1.13	0.09	0.00	0.14
261	1I	0.027	-0.556	-0.019	0.837	13.515	17.123	1.13	1.13	1.13	1.13	0.08	0.00	0.14
261	1J	0.006	-0.556	-0.072	0.837	13.515	17.123	1.13	1.13	1.13	1.13	0.08	0.00	0.14
261	1K	0.027	-0.361	-0.019	1.038	13.550	16.352	1.13	1.13	1.13	1.13	0.09	0.00	0.14
261	1L	0.006	-0.361	-0.072	1.038	13.550	16.352	1.13	1.13	1.13	1.13	0.09	0.00	0.14
261	2	0.022	-0.898	-0.104	1.669	26.145	30.250	1.13	1.13	1.13	1.13	0.14	0.00	0.25
261	7	-0.009	-0.721	-0.085	1.463	20.616	27.652	1.13	1.13	1.13	1.13	0.13	0.00	0.23
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayysup= --	(e arm. base nelle due direz.)					
262	1A	-0.028	0.605	0.022	-0.661	1.974	9.290	1.13	1.13	1.13	1.13	0.06	0.00	0.08
262	1B	-0.082	0.605	0.004	-0.661	1.974	9.290	1.13	1.13	1.13	1.13	0.06	0.00	0.08
262	1C	-0.028	0.818	0.022	-0.413	1.303	10.866	1.13	1.13	1.13	1.13	0.07	0.00	0.09
262	1D	-0.082	0.818	0.004	-0.413	1.303	10.866	1.13	1.13	1.13	1.13	0.07	0.00	0.09
262	1I	-0.026	0.592	0.023	-0.667	1.756	9.853	1.13	1.13	1.13	1.13	0.06	0.00	0.08
262	1J	-0.084	0.592	0.004	-0.667	1.756	9.853	1.13	1.13	1.13	1.13	0.06	0.00	0.08
262	1K	-0.026	0.832	0.023	-0.407	0.563	11.627	1.13	1.13	1.13	1.13	0.08	0.00	0.10
262	1L	-0.084	0.832	0.004	-0.407	0.563	11.627	1.13	1.13	1.13	1.13	0.07	0.00	0.10
262	2	-0.121	1.231	-0.019	-1.067	5.395	15.502	1.13	1.13	1.13	1.13	0.11	0.00	0.13
262	7	-0.103	1.101	-0.014	-0.855	2.262	13.595	1.13	1.13	1.13	1.13	0.10	0.00	0.11
Spess.= 30.0 cm		Axxinf= --		Axxsup= --		Ayyinf= --		Ayysup= --	(e arm. base nelle due direz.)					

STAMPA SINTETICA (stampa degli elementi con massimo IR a presso-tenso-flessione (N, M), IR txy, IR Vz/Vrd1)

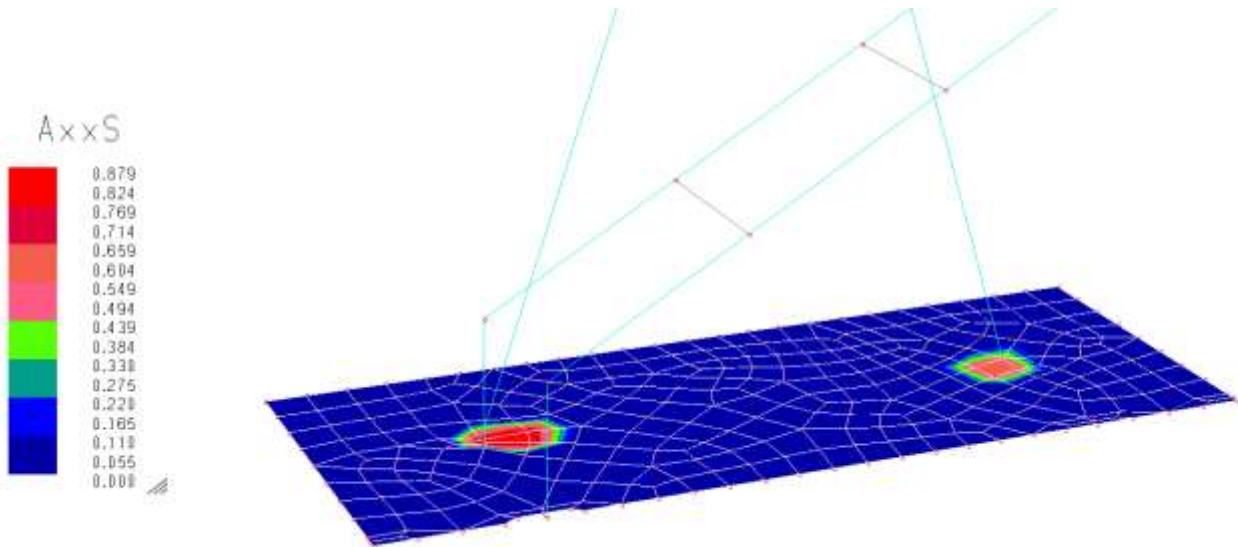
GUSCI

Gruppo	El.	NC	N, M	txy	Vz/Vrd1	Note
			IR	IR	IR	
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1	2	2	--	0.01	--	
1	135	7	--	--	1.00	

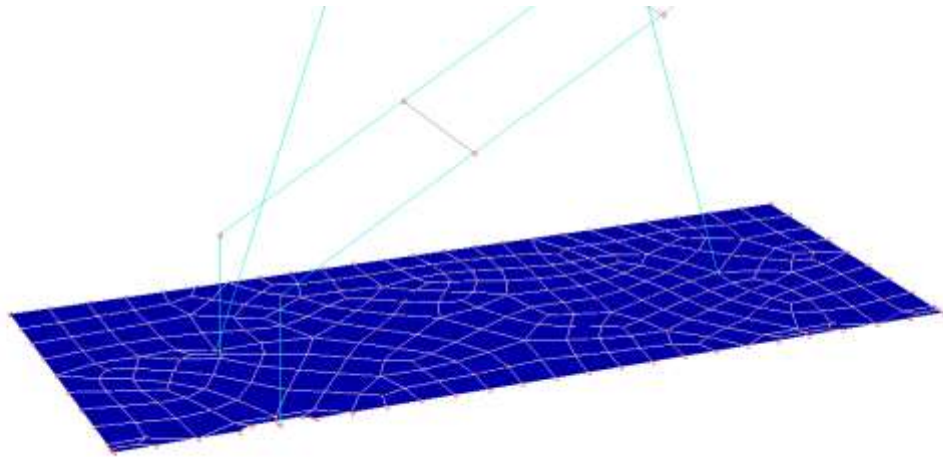
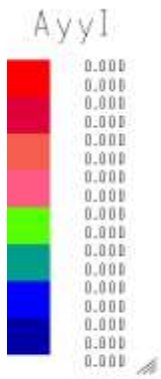
**Armatura aggiuntiva inferiore direzione X cmq/m**



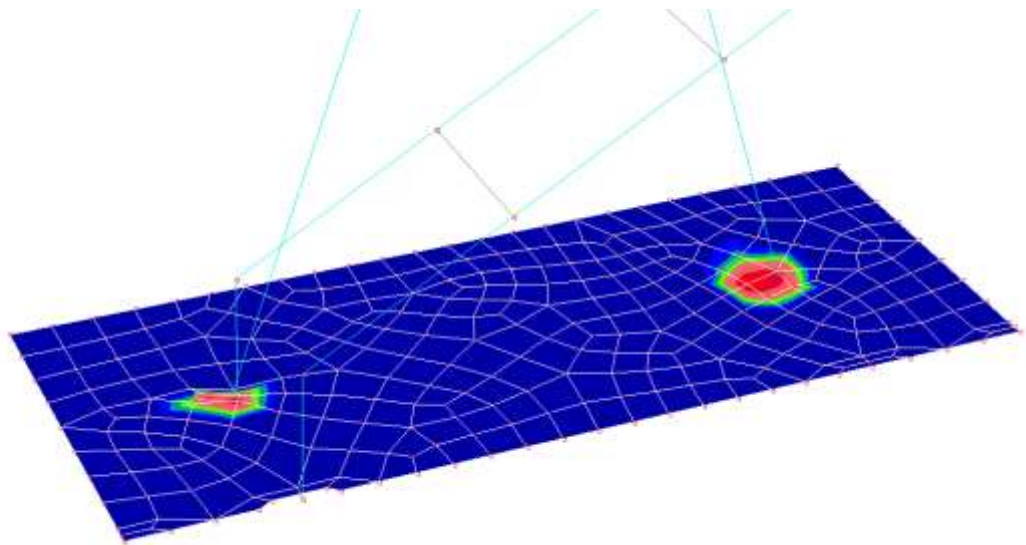
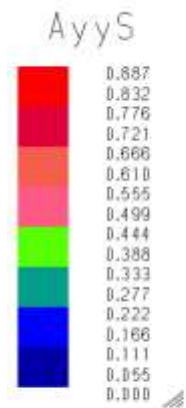
Armatura aggiuntiva superiore direzione X cmq/m



Armatura aggiuntiva inferiore direzione Y cmq/m

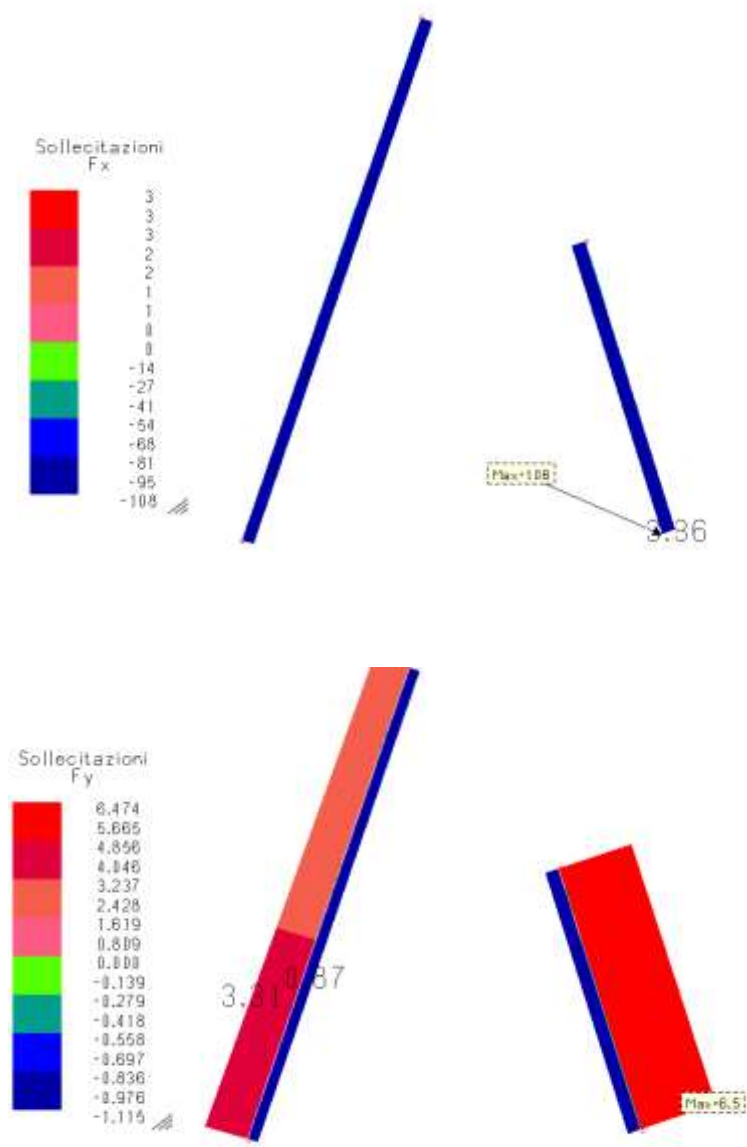


Armatura aggiuntiva superiore direzione Y cmq/m

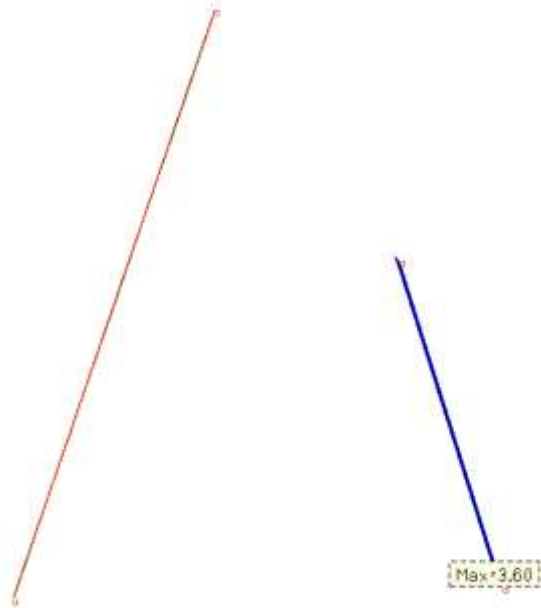
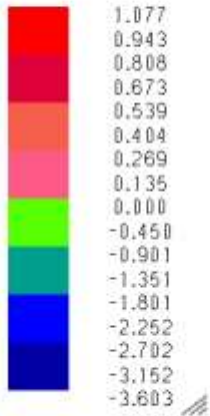


2.2.2.4 GIUNTO DI BASE COLONNA

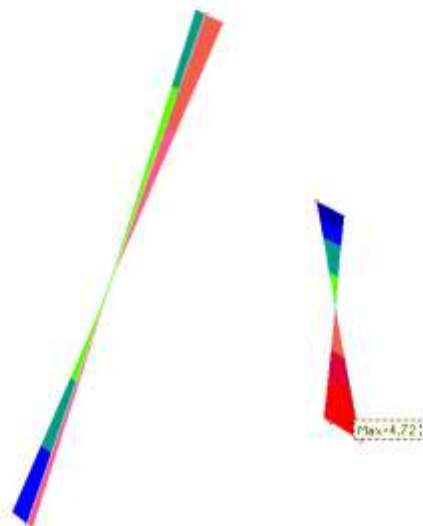
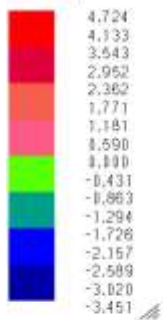
Nelle immagini seguenti si riportano le azioni interne agenti al piede delle colonne, Utilizzate per il dimensionamento del giunto di base.



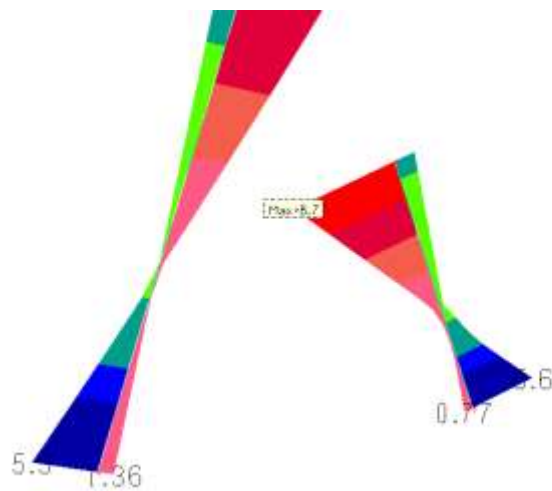
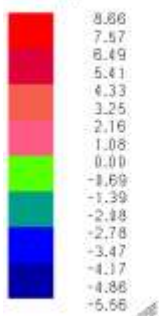
Sollecitazioni  
Fz



Sollecitazioni  
My



Sollecitazioni  
Mz





UNIONE COLONNA - FONDAZIONE

Descrizione: Base

Colonna: Cc D=18 s=1 S 275 (Fe 430)

[Verifica] Banca n. 0: Banche generali AMV

Assi locali piastra

N = 103.00 kN

Ty = 5.00 kN My = 8.00 kN\*m

Tz = 5.00 kN Mz = 8.00 kN\*m

Per le sollecitazioni di ogni c.c. riferirsi ai risultati dell'analisi strutturale.

[Verifica piastra di base] (S 275 (Fe 430), Rck 300)

300x300x20 Tipologia n. 1 A = 250 B = 250

[Verifica cls]

Verifica cls: I.R. = 0.50 (c.c. n. 1)

Verifica piastra: Sigma id = 58.4 N/mm<sup>2</sup> I.R. = 0.22 (c.c. n. 1)

[Verifica tirafondo] (S 275 (Fe 430))

Numero 4 tirafondi: Diam. tirafondo = 20 (mm)

Rosetta: Diam. = 74 Spessore = 12 (mm)

Massime forze trasmesse al singolo tirafondo e relative resistenze:

Fvb,Sd = 1.25 kN Ftb,Sd = 41.75 kN

Fvb,Rd = 48.63 kN Ft,Rd = 72.95 kN I.R. = 0.57

[Verifica nervature]

Numero 4 nervature superiori: h=100 sp=10 (mm)

Sigma = 216.9 N/mm<sup>2</sup> I.R. = 0.8

[Verifica saldatura profilo]

Saldatura a cordone d'angolo: verificata

Altezza di gola: 7 (mm)

Sigma perp. = 68.2 N/mm<sup>2</sup> Tens par. = 2.4 N/mm<sup>2</sup>

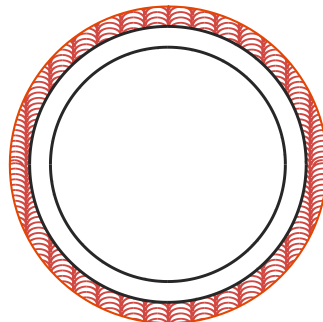
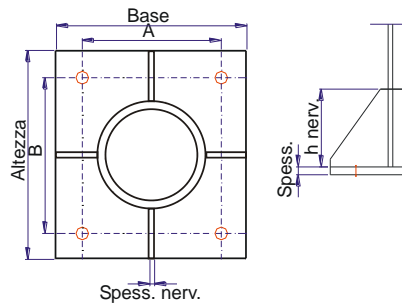
I.R. = 0.29

[Verifica saldatura nervature superiori]

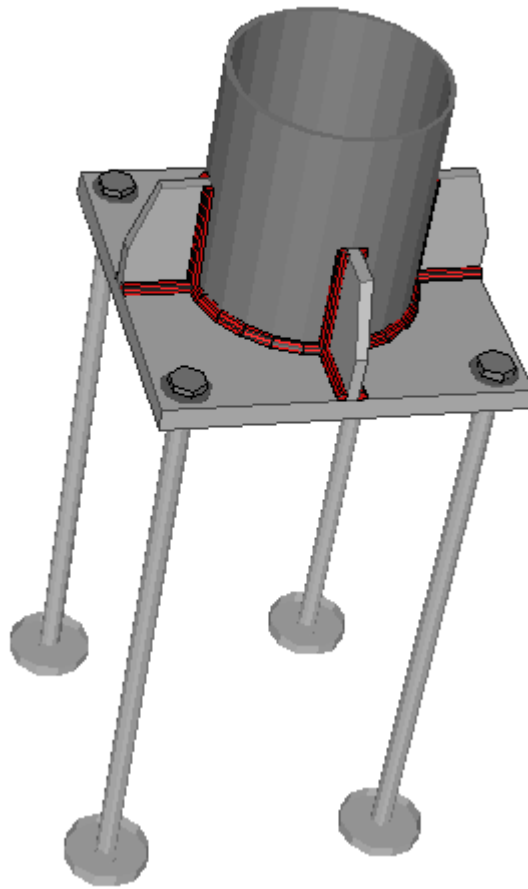
Alt. gola = 7 (mm) Tens par. = 34.8 N/mm<sup>2</sup> Tens perp. = 74.6 N/mm<sup>2</sup> I.R. = 0.41

[Resistenza del nodo]

Modalità di collasso: nessuna, situazione più gravosa [nervature superiori]

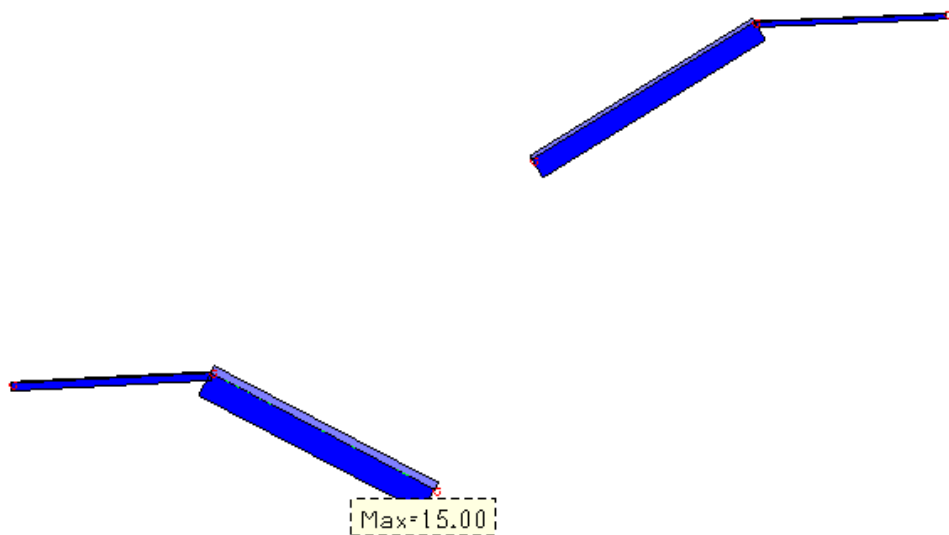




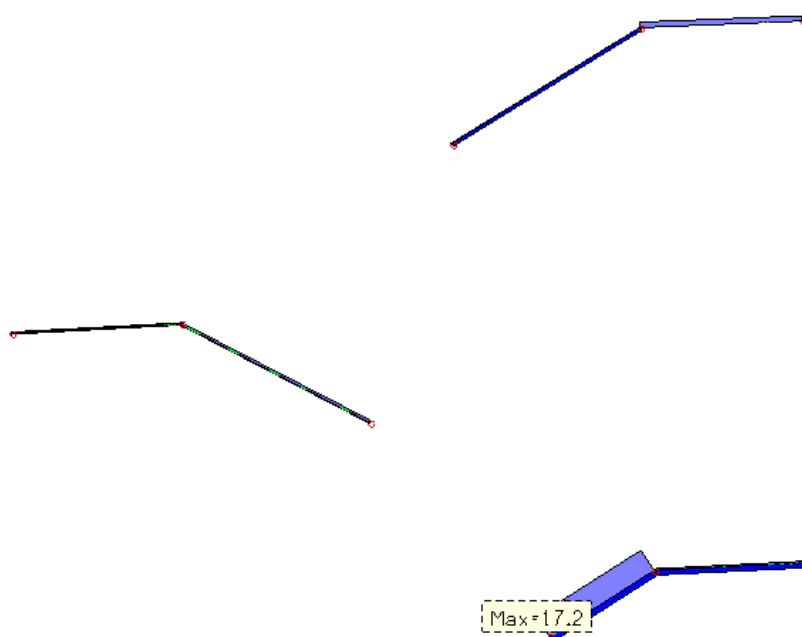


## 2.2.2.5 GIUNTO MENSOLE SU COLONNE

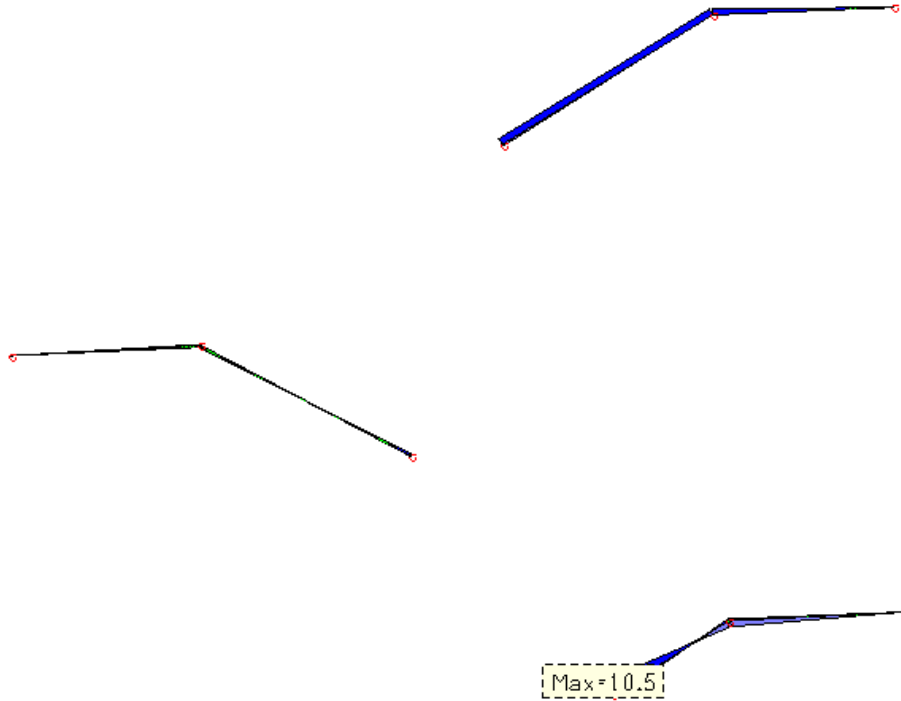
Le mensole sono realizzate con tubolari rettangolari 150x100x10mm saldate direttamente alle colonne circolari. Nelle immagini seguenti si riportano gli involuipi delle azioni interne, utilizzate per la verifica delle saldature.



Azione assiale

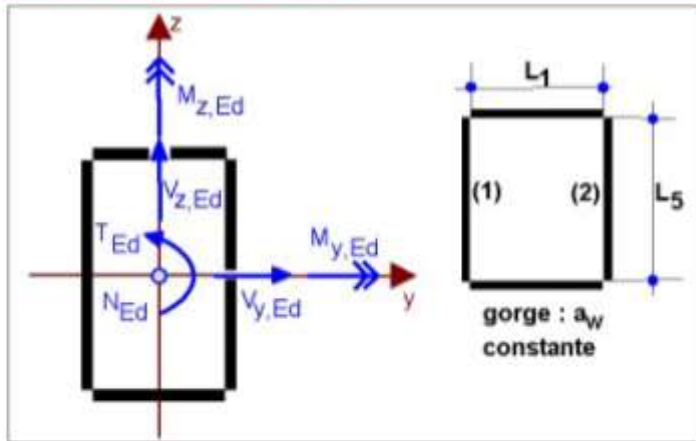


Azione tagliante



Azione flettente

**Assemblage soudé d'un tube rectangulaire**



**A. RECAPITULATIF DES DONNEES**

**Données des soudures**

$L_1 = 80 \text{ mm}$ ,  $L_5 = 130 \text{ mm}$ ,  $a_w = 5 \text{ mm}$  (gorge constante sur le pourtour)

**Nuance**

Acier S275,  $f_y = 275 \text{ MPa}$  (épaisseurs  $\leq 40 \text{ mm}$ )

**Sollicitations**

- $N_{Ed} = 15000 \text{ N}$  ( $> 0$  traction)
- $M_{y, Ed} = 10500 \text{ N.m}$  ( $> 0$  semelle supérieure tendue)
- $V_{y, Ed} = 17000 \text{ N}$  ( $> 0$  suivant schéma)
- $M_{z, Ed} = 7500 \text{ N.m}$  ( $> 0$  âme (1) tendue)
- $V_{z, Ed} = 7000 \text{ N}$  ( $> 0$  suivant schéma)
- $T_{Ed} = 0 \text{ N}$  ( $> 0$  suivant schéma)

**B. VERIFICATIONS SELON EN 1993-1-8**

Nota: Les conditions de dimensions des cordons (longueur) ou des gorges (minimale et maximale) ne sont pas vérifiées par l'utilitaire.

**Résistance**

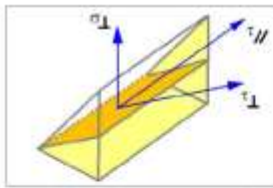
• Principe de répartition des efforts

- $N_{Ed}$  est réparti dans tous les cordons.
- $V_{y, Ed}$  et  $M_{y, Ed}$  sont repris par les seuls cordons de semelle.
- $V_{z, Ed}$  et  $M_{z, Ed}$  sont repris par les seuls cordons d'âme.
- $T_{Ed}$  génère un cisaillement dans tous les cordons.

• Contraintes génériques

- Dans les cordons de semelle
  - Origine  $N_{Ed} = 7.1 \text{ MPa}$
  - Origine  $M_{y, Ed} = 196.6 \text{ MPa}$
  - Origine  $V_{y, Ed} = 21.2 \text{ MPa}$
  - Origine  $T_{Ed} = 0 \text{ MPa}$
- Dans les cordons d'âme
  - Origine  $N_{Ed} = 7.1 \text{ MPa}$
  - Origine  $M_{z, Ed} = 138.2 \text{ MPa}$
  - Origine  $V_{z, Ed} = 5.4 \text{ MPa}$
  - Origine  $T_{Ed} = 0 \text{ MPa}$

• Semelle supérieure



$$\begin{aligned} \sigma_{\perp} &= 144 \text{ MPa} \\ \tau_{\perp} &= 144 \text{ MPa} \\ \tau_{//} &= 21.2 \text{ MPa} \end{aligned}$$

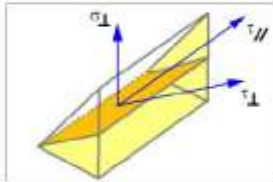
Condition 1 sur  $\sigma_{\perp}$  :  $144 \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $290.3 \leq 404.7 \text{ MPa}$



• Semelle inférieure



$$\begin{aligned} \sigma_{\perp} &= -134 \text{ MPa} \\ \tau_{\perp} &= -134 \text{ MPa} \\ \tau_{//} &= 21.2 \text{ MPa} \end{aligned}$$

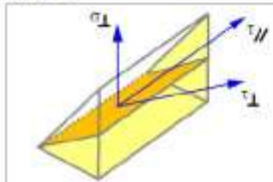
Condition 1 sur  $\sigma_{\perp}$  :  $|-134| \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $270.5 \leq 404.7 \text{ MPa}$



• Ame 1



$$\begin{aligned} \sigma_{\perp} &= 102.7 \text{ MPa} \\ \tau_{\perp} &= 102.7 \text{ MPa} \\ \tau_{//} &= 5.4 \text{ MPa} \end{aligned}$$

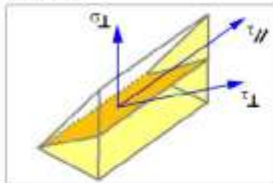
Condition 1 sur  $\sigma_{\perp}$  :  $102.7 \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $205.6 \leq 404.7 \text{ MPa}$



• Ame 2



$$\begin{aligned} \sigma_{\perp} &= -92.7 \text{ MPa} \\ \tau_{\perp} &= -92.7 \text{ MPa} \\ \tau_{//} &= 5.4 \text{ MPa} \end{aligned}$$

Condition 1 sur  $\sigma_{\perp}$  :  $|-92.7| \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $185.6 \leq 404.7 \text{ MPa}$



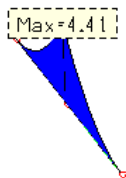
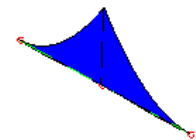
### 2.2.2.6 TRAVERSI COPERTURA

La copertura è realizzata con tubolari tondo di 120 mm di diametro e di 10 mm di spessore. La connessione è realizzata con saldature a cordone d'angolo.

Nelle immagini seguenti si riportano gli involuipi delle azioni interne, utilizzate per la verifica delle saldature.



Azione tagliante

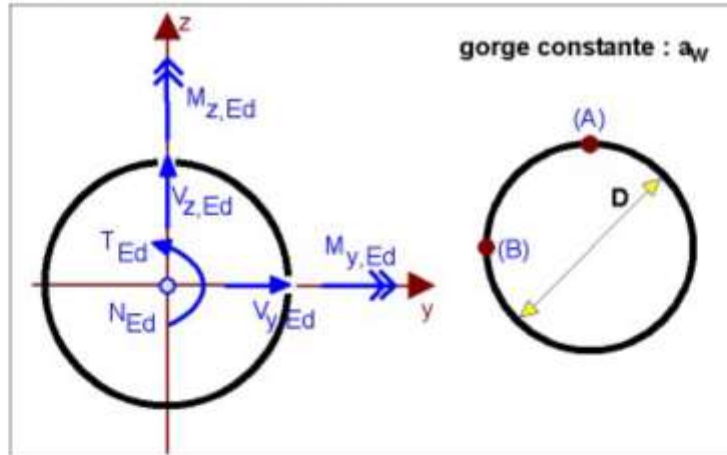


Azione flettente

**Mensola**

Fait le 24 aprile 2019 à 09:15:45.

**Assemblage soudé d'un tube circulaire**



**A. RECAPITULATIF DES DONNEES**

**Données des soudures**

Diamètre intérieur  $D_i = 120$  mm,  $a_w = 5$  mm

**Nuance**

Acier S275,  $f_y = 275$  MPa (épaisseurs  $\leq 40$  mm)

**Sollicitations**

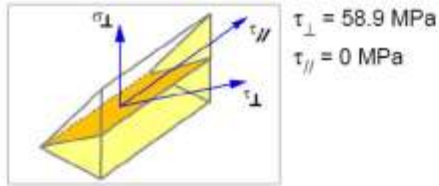
- $N_{Ed} = 0$  N (> 0 traction)
- $M_{y,Ed} = 5000$  N.m (> 0 traction en A)
- $V_{y,Ed} = 0$  N (> 0 suivant schéma)
- $M_{z,Ed} = 0$  N.m (> 0 traction en B)
- $V_{z,Ed} = 9000$  N (> 0 suivant schéma)
- $T_{Ed} = 0$  N (> 0 suivant schéma)

**B. VERIFICATIONS SELON EN 1993-1-8**

Nota: Les conditions de dimensions des cordons (longueur) ou des gorges (minimale et maximale) ne sont pas vérifiées par l'utilitaire.

**Résistance**

- **Principe de répartition des efforts**
  - $N_{Ed}$  est réparti dans tous les cordons.
  - $V_{y,Ed}$  et  $V_{z,Ed}$  sont repris par une section égale à la moitié de la précédente.
  - $M_{y,Ed}$  et  $M_{z,Ed}$  sont combinés.
  - $M_{res} = 5000$  N.m
  - $T_{Ed}$  génère un cisaillement uniforme dans les cordons.
- **Position du moment résultant**
  - $\alpha' = 0^\circ$
- **Contraintes génériques**
  - Origine  $N_{Ed} = 0$  MPa
  - Origine  $M_{res} = 83,3$  MPa
  - Origine  $V_{y,Ed} = 0$  MPa
  - Origine  $V_{z,Ed} = 9,3$  MPa
  - Origine  $T_{Ed} = 0$  MPa
- **Point A: flexion résultante maximale (N + M) concomittante avec  $V_{y,Ed}$** 
  - $\sigma_{\perp} = 58,9$  MPa



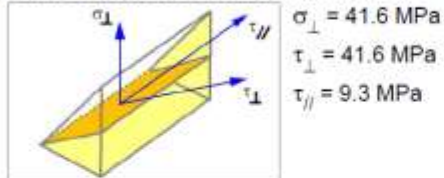
Condition 1 sur  $\sigma_{\perp}$  :  $58.9 \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $117.8 \leq 404.7 \text{ MPa}$



● Point B: flexion résultante maximale (N + M) concomittante avec Vz,Ed



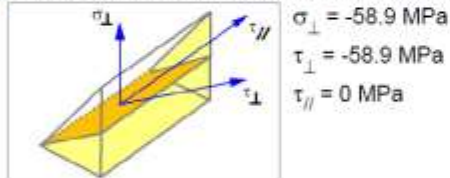
Condition 1 sur  $\sigma_{\perp}$  :  $41.6 \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $84.7 \leq 404.7 \text{ MPa}$



● Point C: flexion résultante maximale sur la fibre opposée concomittante avec Vy,Ed



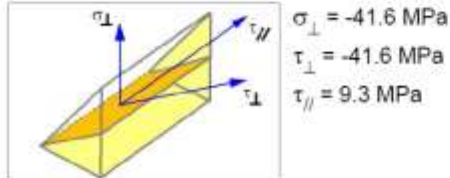
Condition 1 sur  $\sigma_{\perp}$  :  $|-58.9| \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $117.8 \leq 404.7 \text{ MPa}$



● Point D: flexion résultante maximale sur la fibre opposée concomittante avec Vz,Ed



Condition 1 sur  $\sigma_{\perp}$  :  $|-41.6| \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $84.7 \leq 404.7 \text{ MPa}$





2.2.2.7 SOMMITA' COLONNE

La copertura è realizzata con tubolari tondo di 80 mm di diametro e di 10 mm di spessore. La connessione è realizzata con saldature a cordone d'angolo.

Nelle immagini seguenti si riportano gli involuipi dle azioni interne, utilizzate per la verifica delle saldature.



Azione assiale

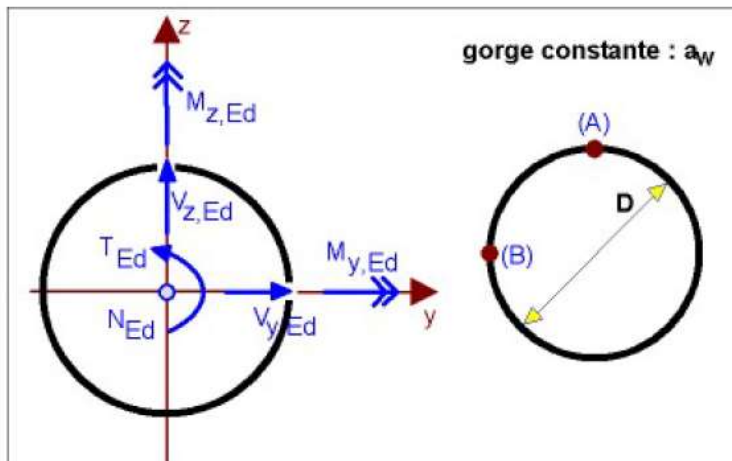


Azione tagliante



Diagramma momento flettente

**Assemblage soudé d'un tube circulaire**



**A. RECAPITULATIF DES DONNEES**

**Données des soudures**

Diamètre intérieur  $D_i = 80$  mm,  $a_w = 6$  mm

**Nuance**

Acier S275,  $f_y = 275$  MPa (épaisseurs  $\leq 40$  mm)

**Sollicitations**

- $N_{Ed} = 78200$  N ( $> 0$  traction)
- $M_{y,Ed} = 7000$  N.m ( $> 0$  traction en A)
- $V_{y,Ed} = 0$  N ( $> 0$  suivant schéma)
- $M_{z,Ed} = 0$  N.m ( $> 0$  traction en B)
- $V_{z,Ed} = 7100$  N ( $> 0$  suivant schéma)
- $T_{Ed} = 0$  N ( $> 0$  suivant schéma)

**B. VERIFICATIONS SELON EN 1993-1-8**

Nota: Les conditions de dimensions des cordons (longueur) ou des gorges (minimale et maximale) ne sont pas vérifiées par l'utilitaire.

**Résistance**

● **Principe de répartition des efforts**

- $N_{Ed}$  est réparti dans tous les cordons.
- $V_{y,Ed}$  et  $V_{z,Ed}$  sont repris par une section égale à la moitié de la précédente.
- $M_{y,Ed}$  et  $M_{z,Ed}$  sont combinés.
- $M_{res} = 7000$  N.m
- $T_{Ed}$  génère un cisaillement uniforme dans les cordons.

● **Position du moment résultant**

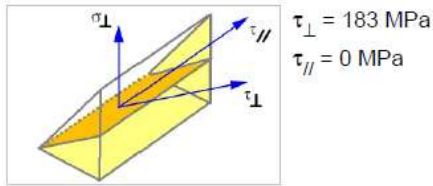
$\alpha' = 0^\circ$

● **Contraintes génériques**

- Origine  $N_{Ed} = 49.3$  MPa
- Origine  $M_{res} = 209.5$  MPa
- Origine  $V_{y,Ed} = 0$  MPa
- Origine  $V_{z,Ed} = 8.9$  MPa
- Origine  $T_{Ed} = 0$  MPa

● **Point A: flexion résultante maximale (N + M) concomittante avec  $V_{y,Ed}$**

$\sigma_{\perp} = 183$  MPa



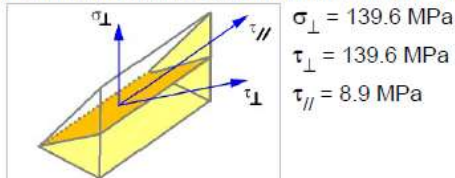
Condition 1 sur  $\sigma_{\perp}$  :  $183 \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $366 \leq 404.7 \text{ MPa}$



● Point B: flexion résultante maximale (N + M) concomittante avec Vz,Ed



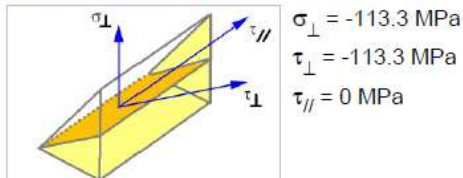
Condition 1 sur  $\sigma_{\perp}$  :  $139.6 \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $279.6 \leq 404.7 \text{ MPa}$



● Point C: flexion résultante maximale sur la fibre opposée concomittante avec Vy,Ed



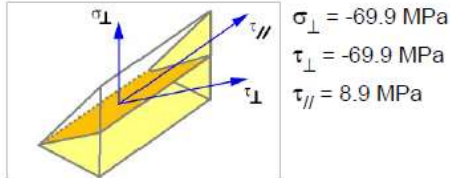
Condition 1 sur  $\sigma_{\perp}$  :  $|-113.3| \leq 309.6 \text{ MPa}$



Condition 2 sur contrainte de comparaison :  $226.6 \leq 404.7 \text{ MPa}$



● Point D: flexion résultante maximale sur la fibre opposée concomittante avec Vz,Ed



Condition 1 sur  $\sigma_{\perp}$  :  $|-69.9| \leq 309.6 \text{ MPa}$



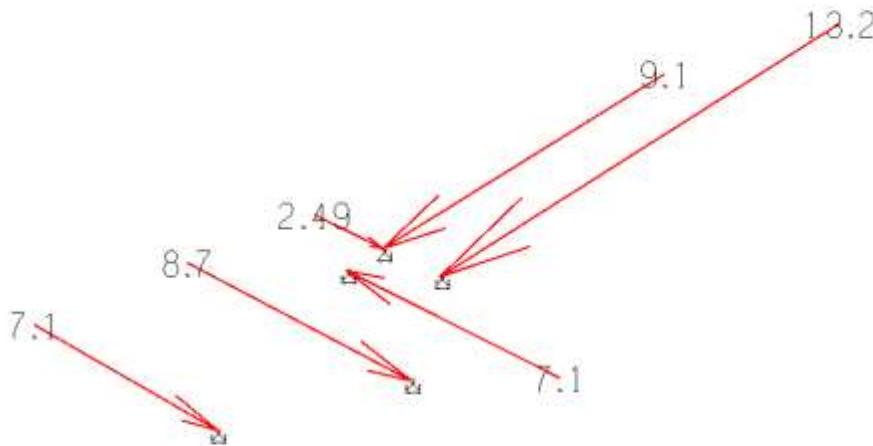
Condition 2 sur contrainte de comparaison :  $140.6 \leq 404.7 \text{ MPa}$



2.2.2.1 ANCORAGGI AI PIANI


In corrispondenza dei pianerottoli di sbrco la struttura è vincolata all'esistente struttura muraria. La connessione è realizzata attraverso tasselli chimici.

Nell'immagine seguente si riportano le massime azioni agenti nei punti di ancoraggio.



La massima azione è pari a 13,20kN.

La resistenza massima per barre di 10 mm di diametro ancorate con resina tipo HILTI HY 170 in fori di profondità maggiore di 100 mm è pari a 1,60kN considerato il tiro massimo pari a 13,2 kN per ogni punto di fissaggio occorrono 10 tasselli.

Load type	Anchor size	h <sub>ef</sub> [mm]	f <sub>b</sub> [N/mm <sup>2</sup> ]	w/w and w/d		d/d	
				Ta	Tb	Ta	Tb
Loads [kN]							
 <b>SC2 – Solid clay brick</b> Mz, NF (ETA data)							
<b>N<sub>Rd,p</sub> = N<sub>Rd,b</sub></b> (c ≥ 50 mm)	HIT-V	M8, M10, M12, M16	≥ 50	10	0,6 (0,6°)		
				20	0,8 (0,8°)		
	HIT-V + HIT-SC	M8, M10, M12, M16	≥ 80	10	1,0 (1,2°)		
				20	1,4 (1,6°)		
<b>N<sub>Rd,p</sub> = N<sub>Rd,b</sub></b> (c ≥ 150 mm)	HIT-IC + HIT-SC	M8, M10, M12	≥ 100	10	1,6 (1,8°)		
				20	2,2 (2,4°)		


2.2.3 VERIFICHE TRAVE PASSERELLA

Di seguito si riportano le verifiche della trave metallica alveolare di sostegno alla passerella di sbarco della scala. Tale passerella serve ad alzare il piano di calpestio di 70 cm dall'attuale piano campagna.

**ACB+**  
v 3.08

**FOGLIO DI CALCOLO**

Trave 1



Utilizzatore :  
Società :  
Disegnato :

<b>ACB+</b> v 3.08	<b>Trave f</b>		
<u>Parametri</u>			
<i>Parametri generali</i>			
<b>Trave non composta</b>			
Configurazione :	Trave rettilinea ad altezza costante		
Ossitaglio :	Processo ACB brevettato		
Appoggi laterali :	Trave in semplice appoggio		
Distanza tra appoggi :	L = 6.500 m		
Numero totale di alveoli :	n = 32		
Diametro degli alveoli :	$a_0 = 150.0$ mm		
Distanza all'asse tra alveoli :	e = 200.0 mm		
Larghezza montante :	$w = e - a_0 = 50.0$ mm		
Snellezza montante :	$\lambda = e / a_0 = 1.333$		
Larghezza montanti d'estremità :	$w_{end,l} = 75.0$ mm	$w_{end,r} = 75.0$ mm	
Altezza della trave alveolare :	$H_1 = 233.2$ mm		
Massa :	m = 223 kg		
Superficie totale da proteggere :	S = 6.52 m <sup>2</sup>		
Superficie da proteggere (senza faccia superiore) :	S' = 5.35 m <sup>2</sup>		
Massività :	M = 229.06 m <sup>3</sup>		
Massività (senza faccia superiore) :	M' = 187.93 m <sup>3</sup>		
Rapporto dell'area delle fange :	$(b_1 t_1)_{max} / (b_1 t_1)_{min} = 1.00 < 4.50$		
Rapporto $H_1 / a_0$ :	$H_1 / a_0 = 1.55 \quad 1.25 < H_1 / a_0 < 4.00$		
Snellezza alveolo :	$\beta = a_0 / t_w = 25.00 < 90.00$		
Snellezza anima :	$h_w / t_w = 30.69 < 124.0 t_w = 114.6$		
<i>Posizionamento trave</i>			
La trave in questione è di riva.			
Interasse trave	- con il bordo soletto :	$L_1 = 0.200$ m	
	- con la trave adiacente :	$L_2 = 2.000$ m	
Larghezza per il calcolo dei carichi di superficie supportati dalla trave :			
	dai lato bordo soletto :	$d_1 = 0.200$ m	
	dai lato della trave adiacente di spina :	$d_2 = 1.000$ m	
	Larghezza totale :	$d_1 + d_2 = 1.200$ m	
	Area :	$S = 7.800$ m <sup>2</sup>	
<i>Ritegno laterale</i>			
Ritegni laterali puntuali :			
	x (m)	Ritegni laterali	
1	0.0	Entrambe le fange	Sezione d'origine
2	3.250	Entrambe le fange	
3	6.500	Entrambe le fange	Sezione finale
11/04/2019	Software use conditions apply		2 / 38

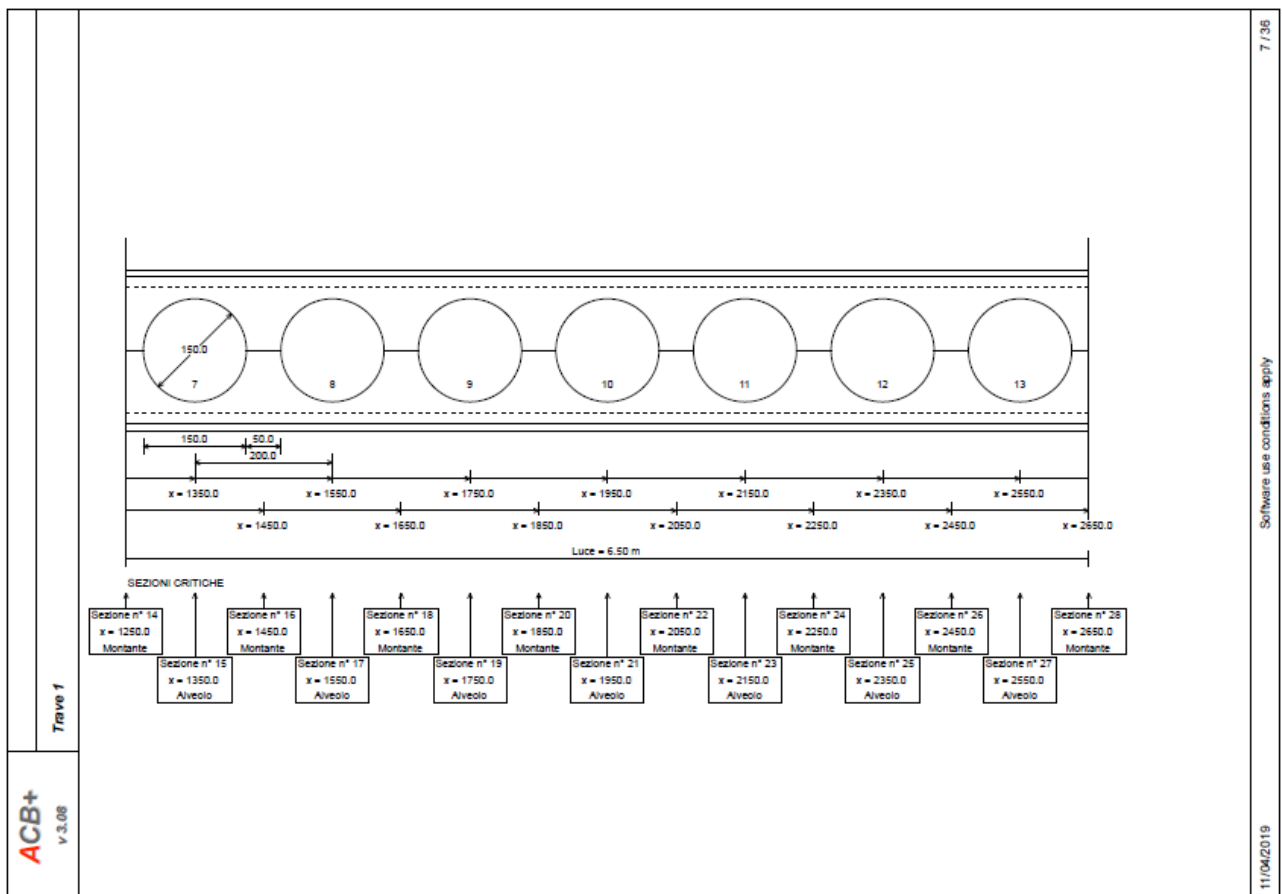
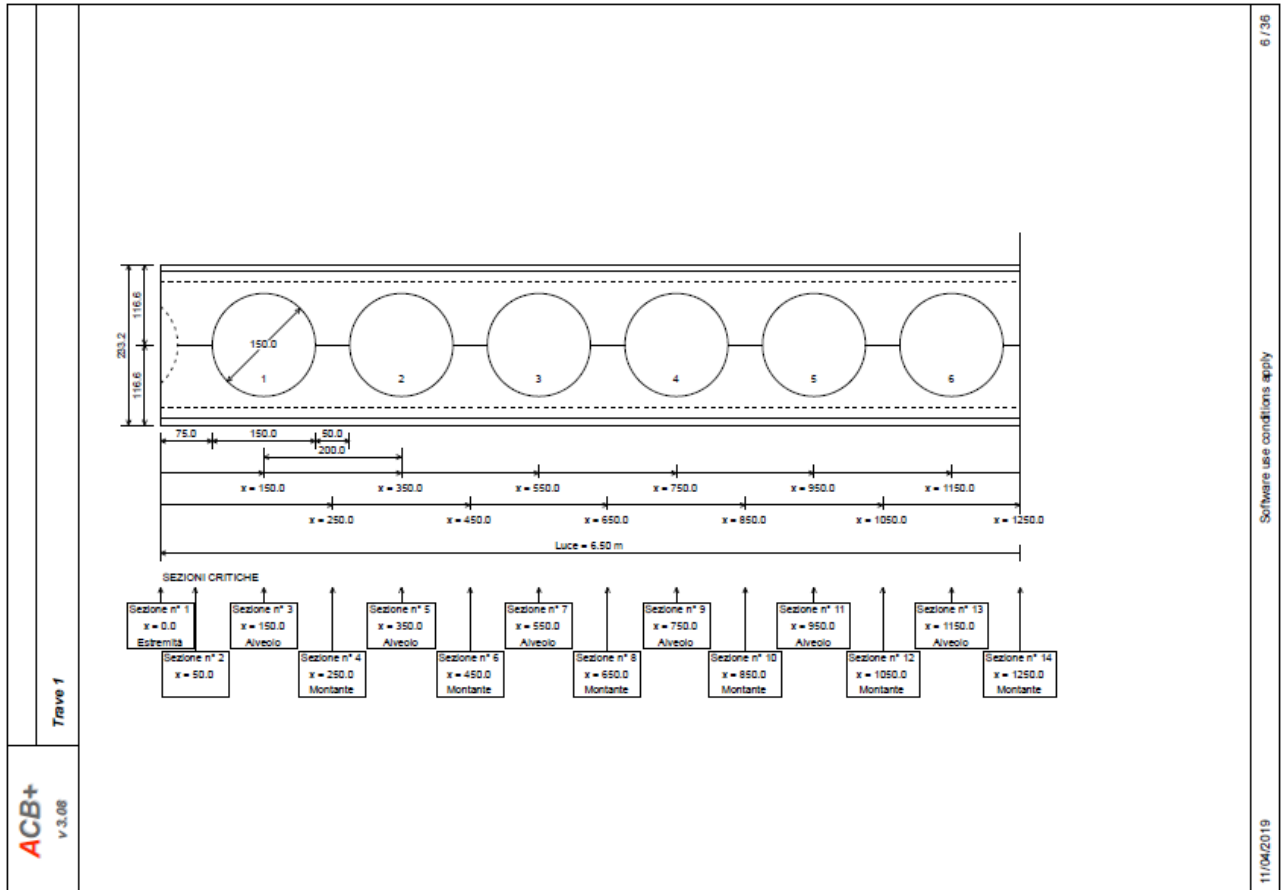
<p><b>ACB+</b> v 3.08</p>	<p><b>Trave 1</b></p>																																							
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11/04/2019	Software use conditions apply	3 / 38																																						

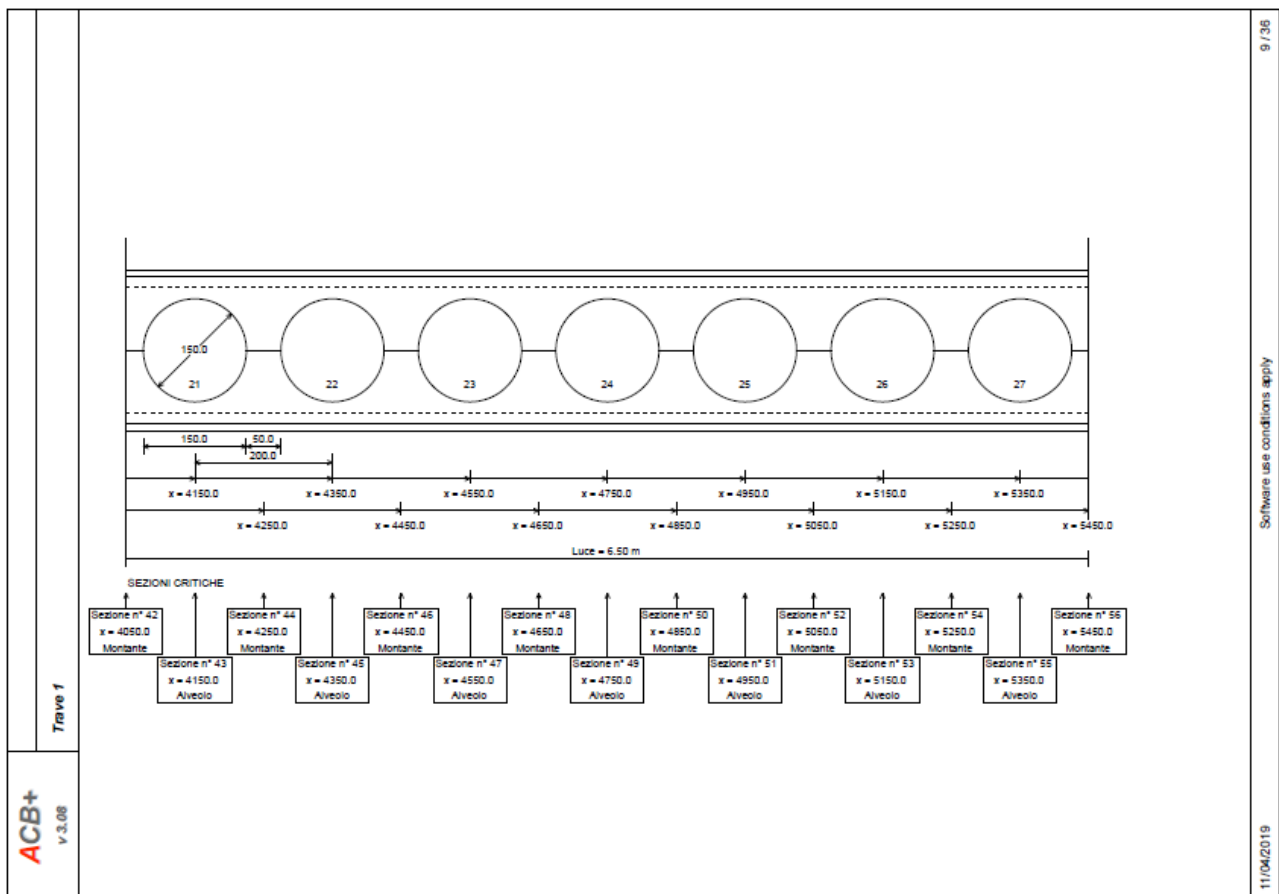
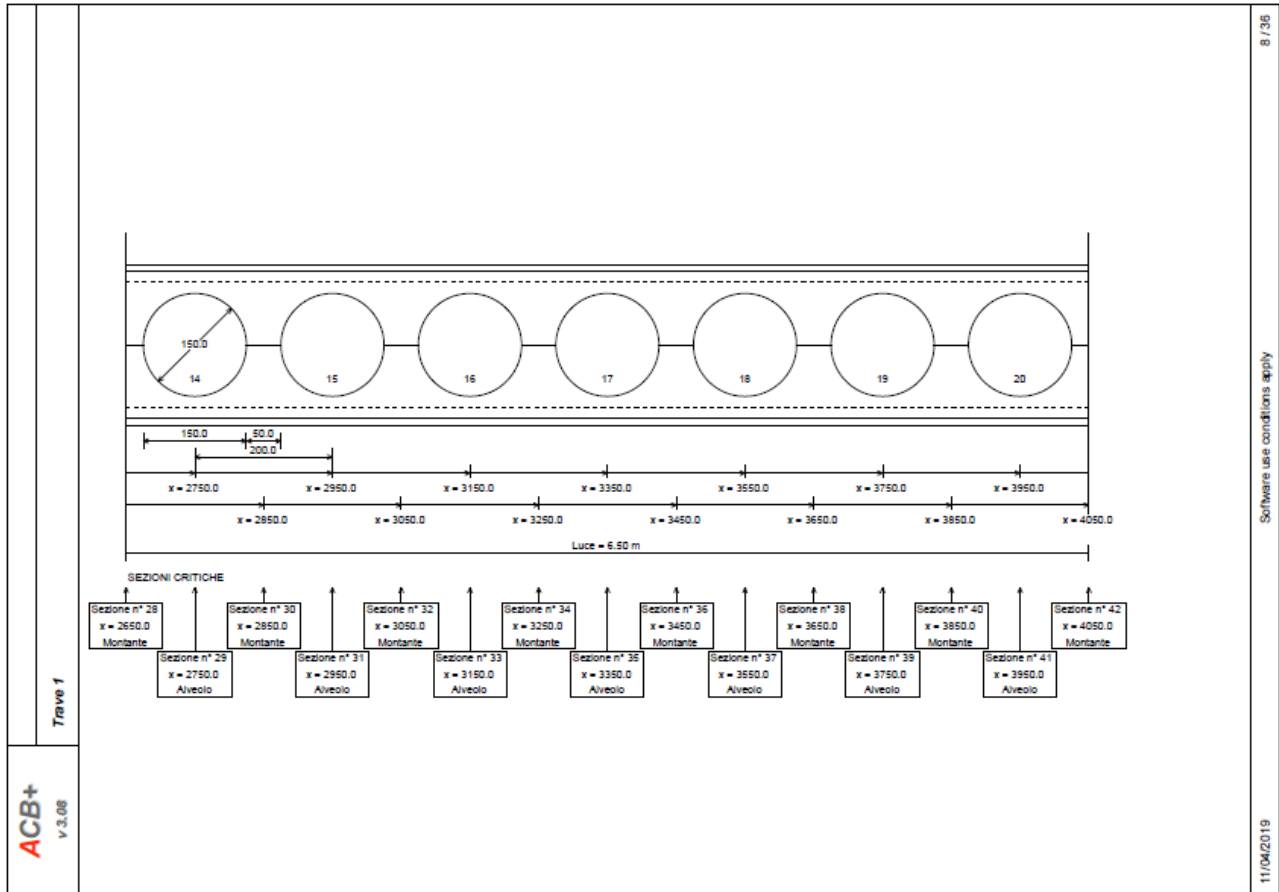


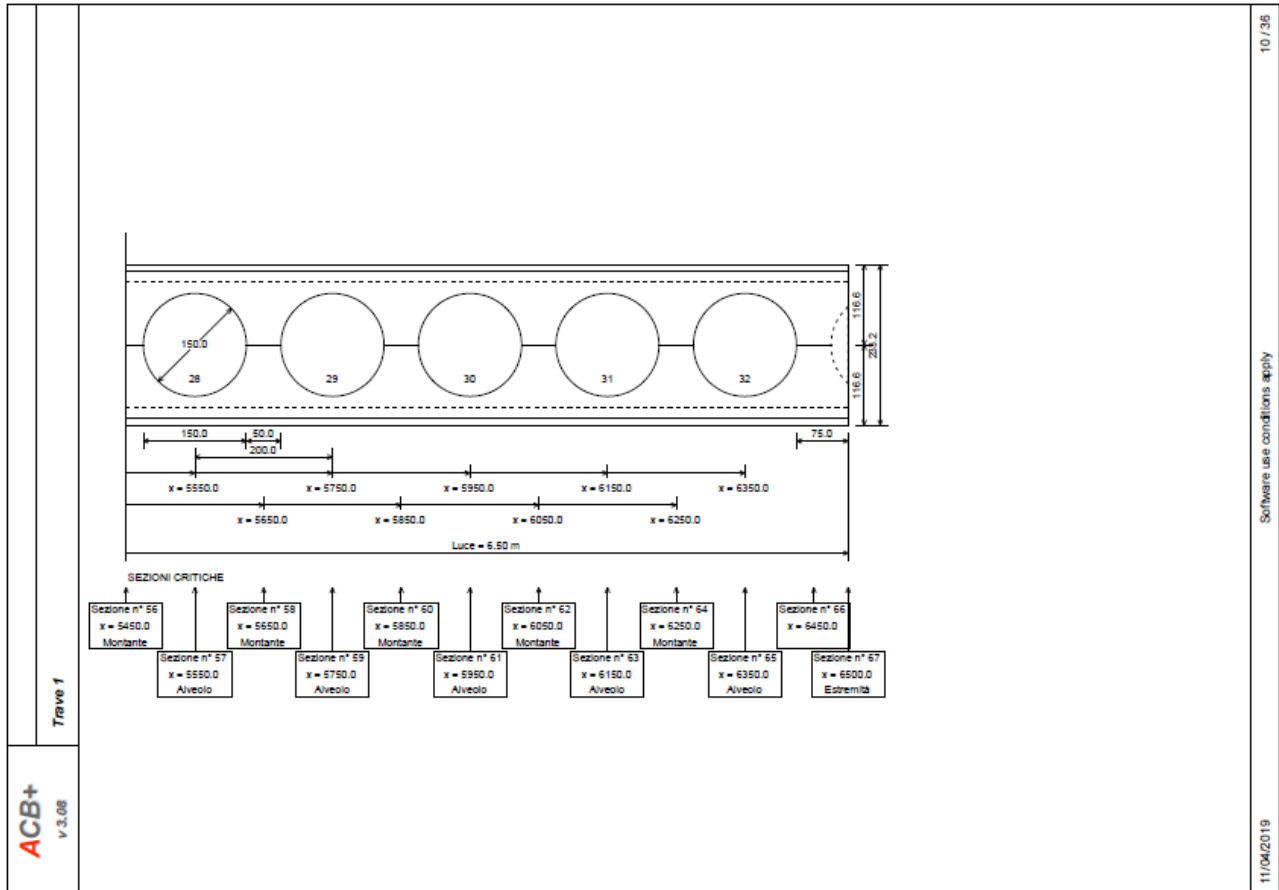
<b>ACB+</b> v.3.08	<b>Trave 1</b>
<b>Tipologie di carico</b>	
<b>Carichi permanenti portati (G)</b>	
Peso proprio :	0.34 kN/m
Proveniente da :	Massa della trave : 223 kg
Carico per unità di superficie :	p = 1.00 kN/m <sup>2</sup> (Carico verticale) Carico applicato su un'area : S = L d = 7.80 m <sup>2</sup>
	Calcolata con : L = 6.50 m e d = 1.20 m
	Forza risultante : verticale : R <sub>p,v</sub> = 7.80 kN orizzontale : R <sub>p,h</sub> = 0.00 kN
Reazioni agli appoggi :	Estremità sx : R <sub>Av</sub> = 5.00 kN Estremità dx : R <sub>Bv</sub> = 5.00 kN
<b>Carichi accidentali 1 (Q1)</b>	
	Coefficiente parziale Psi $\psi_D = 0.70$
Carico per unità di superficie :	p = 4.00 kN/m <sup>2</sup> (Carico verticale) Carico applicato su un'area : S = L d = 7.80 m <sup>2</sup>
	Calcolata con : L = 6.50 m e d = 1.20 m
	Forza risultante : verticale : R <sub>p,v</sub> = 31.20 kN orizzontale : R <sub>p,h</sub> = 0.00 kN
Reazioni agli appoggi :	Estremità sx : R <sub>Av</sub> = 15.60 kN Estremità dx : R <sub>Bv</sub> = 15.60 kN
<b>Carichi accidentali 2 (Q2)</b>	
	Coefficiente parziale Psi $\psi_D = 0.50$
Carico per unità di superficie :	p = 1.20 kN/m <sup>2</sup> (Carico verticale) Carico applicato su un'area : S = L d = 7.80 m <sup>2</sup>
	Calcolata con : L = 6.50 m e d = 1.20 m
	Forza risultante : verticale : R <sub>p,v</sub> = 9.36 kN orizzontale : R <sub>p,h</sub> = 0.00 kN
Reazioni agli appoggi :	Estremità sx : R <sub>Av</sub> = 4.68 kN Estremità dx : R <sub>Bv</sub> = 4.68 kN
<b>Coefficienti nazionali</b>	
Coefficienti dei carichi :	$\gamma_{G,sup} = 1.350$ $\gamma_{G,inf} = 1.000$ $\gamma_Q = 1.500$
Coefficienti dei materiali :	$\gamma_{M0} = 1.050$ $\gamma_{M1} = 1.050$ $\gamma_{M2} = 1.250$ $\gamma_{M,t} = 1.000$
<b>Proprietà acciaio</b>	
	Both chords
Steel	S275 JR/J0/J2
Reduction curve from	EC3
Standard	EN 10025-2 : 2004
Flange f <sub>y</sub>   f <sub>t</sub> (MPa)	275   430
Web f <sub>y</sub>   f <sub>t</sub> (MPa)	275   430
Cross-section f <sub>y</sub>   f <sub>t</sub> (MPa)	275   430
Cross-section g	0.924
11/04/2019	Software use conditions apply
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<b>ACB+</b> v 3.08	<b>Trave 1</b>	
Databases 2105-01		
<i>Combinazioni di carico</i>		
Stato Limite Ultimo	U1 = 1.35 G + 1.50 Q1 + 0.75 Q2 U2 = 1.35 G + 1.05 Q1 + 1.50 Q2	
Stato Limite di Servizio	S1 = 1.00 G + 1.00 Q1 S2 = 1.00 G + 1.00 Q1 + 0.50 Q2 S3 = 1.00 G + 1.00 Q2 S4 = 1.00 G + 0.70 Q1 + 1.00 Q2	
Stato Limite Ultimo Incendio	Nessuna combinazione definita	
11/04/2019	Software use conditions apply	5 / 38








ACB+  
v.3.08

Trave 1

 v 3.08	Trave 1																																																																																																																																																																																																																																																																																																																																																																																																	
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<tr><td>4</td><td>41.9</td><td>20.05</td><td>4.62</td><td>34.68</td><td>11.03</td><td>214.9</td><td>36.29</td><td>8.808</td></tr> <tr><td>5</td><td>42.0</td><td>20.08</td><td>4.63</td><td>34.82</td><td>11.15</td><td>214.7</td><td>36.44</td><td>8.853</td></tr> <tr><td>6</td><td>42.2</td><td>20.12</td><td>4.65</td><td>34.99</td><td>11.29</td><td>214.5</td><td>36.63</td><td>8.909</td></tr> <tr><td>7</td><td>42.5</td><td>20.17</td><td>4.66</td><td>35.20</td><td>11.47</td><td>214.2</td><td>36.85</td><td>8.976</td></tr> <tr><td>8</td><td>42.7</td><td>20.22</td><td>4.68</td><td>35.44</td><td>11.68</td><td>213.9</td><td>37.10</td><td>9.053</td></tr> <tr><td>9</td><td>43.0</td><td>20.28</td><td>4.70</td><td>35.70</td><td>11.91</td><td>213.6</td><td>37.39</td><td>9.141</td></tr> <tr><td>10</td><td>43.4</td><td>20.35</td><td>4.73</td><td>36.01</td><td>12.19</td><td>213.2</td><td>37.72</td><td>9.241</td></tr> <tr><td>11</td><td>43.8</td><td>20.43</td><td>4.75</td><td>36.34</td><td>12.49</td><td>212.7</td><td>38.08</td><td>9.353</td></tr> <tr><td>12</td><td>44.2</td><td>20.52</td><td>4.78</td><td>36.71</td><td>12.84</td><td>212.3</td><td>38.48</td><td>9.478</td></tr> <tr><td>13</td><td>44.6</td><td>20.61</td><td>4.81</td><td>37.11</td><td>13.22</td><td>211.8</td><td>38.92</td><td>9.615</td></tr> <tr><td>14</td><td>45.1</td><td>20.71</td><td>4.85</td><td>37.55</td><td>13.65</td><td>211.2</td><td>39.39</td><td>9.766</td></tr> <tr><td>15</td><td>45.7</td><td>20.82</td><td>4.89</td><td>38.03</td><td>14.13</td><td>210.6</td><td>39.90</td><td>9.930</td></tr> <tr><td>16</td><td>46.3</td><td>20.94</td><td>4.93</td><td>38.54</td><td>14.65</td><td>210.0</td><td>40.46</td><td>10.11</td></tr> <tr><td>17</td><td>46.9</td><td>21.07</td><td>4.97</td><td>39.08</td><td>15.23</td><td>209.3</td><td>41.05</td><td>10.30</td></tr> 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<tr><td>39</td><td>75.0</td><td>26.74</td><td>6.93</td><td>63.27</td><td>60.57</td><td>185.9</td><td>67.58</td><td>21.45</td></tr> <tr><td>40</td><td>77.2</td><td>27.17</td><td>7.08</td><td>65.12</td><td>65.96</td><td>184.5</td><td>69.63</td><td>22.51</td></tr> </tbody> </table>									θ (°)	h (mm)	A (cm <sup>2</sup> )	A <sub>v</sub> (cm <sup>2</sup> )	z <sub>G</sub> (mm)	I <sub>v</sub> (cm <sup>4</sup> )	A <sub>m</sub> /V (m <sup>-1</sup> )	z <sub>ANP</sub> (mm)	W <sub>g</sub> (cm <sup>3</sup> )	0	41.6	19.99	4.60	34.43	10.82	215.2	36.02	8.728	1	41.6	19.99	4.60	34.45	10.83	215.2	36.04	8.733	2	41.6	20.00	4.61	34.49	10.87	215.2	36.09	8.748	3	41.7	20.02	4.61	34.57	10.94	215.1	36.17	8.773	4	41.9	20.05	4.62	34.68	11.03	214.9	36.29	8.808	5	42.0	20.08	4.63	34.82	11.15	214.7	36.44	8.853	6	42.2	20.12	4.65	34.99	11.29	214.5	36.63	8.909	7	42.5	20.17	4.66	35.20	11.47	214.2	36.85	8.976	8	42.7	20.22	4.68	35.44	11.68	213.9	37.10	9.053	9	43.0	20.28	4.70	35.70	11.91	213.6	37.39	9.141	10	43.4	20.35	4.73	36.01	12.19	213.2	37.72	9.241	11	43.8	20.43	4.75	36.34	12.49	212.7	38.08	9.353	12	44.2	20.52	4.78	36.71	12.84	212.3	38.48	9.478	13	44.6	20.61	4.81	37.11	13.22	211.8	38.92	9.615	14	45.1	20.71	4.85	37.55	13.65	211.2	39.39	9.766	15	45.7	20.82	4.89	38.03	14.13	210.6	39.90	9.930	16	46.3	20.94	4.93	38.54	14.65	210.0	40.46	10.11	17	46.9	21.07	4.97	39.08	15.23	209.3	41.05	10.30	18	47.6	21.20	5.02	39.67	15.86	208.6	41.69	10.52	19	48.3	21.35	5.07	40.29	16.56	207.9	42.36	10.74	20	49.1	21.50	5.12	40.96	17.33	207.1	43.08	10.99	21	49.9	21.66	5.18	41.66	18.17	206.3	43.85	11.26	22	50.7	21.84	5.24	42.41	19.10	205.4	44.66	11.54	23	51.6	22.02	5.30	43.20	20.11	204.5	45.53	11.85	24	52.6	22.22	5.37	44.04	21.23	203.6	46.44	12.18	25	53.6	22.42	5.44	44.92	22.45	202.6	47.40	12.54	26	54.7	22.64	5.52	45.85	23.79	201.7	48.41	12.92	27	55.8	22.87	5.60	46.83	25.27	200.6	49.48	13.33	28	57.0	23.11	5.68	47.86	26.89	199.6	50.61	13.77	29	58.3	23.36	5.77	48.94	28.67	198.5	51.80	14.25	30	59.6	23.63	5.86	50.08	30.63	197.4	53.05	14.76	31	61.0	23.91	5.96	51.28	32.79	196.2	54.36	15.30	32	62.5	24.21	6.06	52.54	35.16	195.0	55.74	15.89	33	64.0	24.52	6.16	53.86	37.79	193.8	57.19	16.52	34	65.6	24.84	6.28	55.24	40.69	192.6	58.71	17.20	35	67.3	25.18	6.40	56.69	43.89	191.3	60.32	17.93	36	69.1	25.54	6.52	58.22	47.44	190.0	62.00	18.71	37	71.0	25.92	6.65	59.82	51.37	188.7	63.77	19.56	38	72.9	26.32	6.79	61.50	55.73	187.3	65.63	20.47	39	75.0	26.74	6.93	63.27	60.57	185.9	67.58	21.45	40	77.2	27.17	7.08	65.12	65.96	184.5	69.63
θ (°)	h (mm)	A (cm <sup>2</sup> )	A <sub>v</sub> (cm <sup>2</sup> )	z <sub>G</sub> (mm)	I <sub>v</sub> (cm <sup>4</sup> )	A <sub>m</sub> /V (m <sup>-1</sup> )	z <sub>ANP</sub> (mm)	W <sub>g</sub> (cm <sup>3</sup> )																																																																																																																																																																																																																																																																																																																																																																																										
0	41.6	19.99	4.60	34.43	10.82	215.2	36.02	8.728																																																																																																																																																																																																																																																																																																																																																																																										
1	41.6	19.99	4.60	34.45	10.83	215.2	36.04	8.733																																																																																																																																																																																																																																																																																																																																																																																										
2	41.6	20.00	4.61	34.49	10.87	215.2	36.09	8.748																																																																																																																																																																																																																																																																																																																																																																																										
3	41.7	20.02	4.61	34.57	10.94	215.1	36.17	8.773																																																																																																																																																																																																																																																																																																																																																																																										
4	41.9	20.05	4.62	34.68	11.03	214.9	36.29	8.808																																																																																																																																																																																																																																																																																																																																																																																										
5	42.0	20.08	4.63	34.82	11.15	214.7	36.44	8.853																																																																																																																																																																																																																																																																																																																																																																																										
6	42.2	20.12	4.65	34.99	11.29	214.5	36.63	8.909																																																																																																																																																																																																																																																																																																																																																																																										
7	42.5	20.17	4.66	35.20	11.47	214.2	36.85	8.976																																																																																																																																																																																																																																																																																																																																																																																										
8	42.7	20.22	4.68	35.44	11.68	213.9	37.10	9.053																																																																																																																																																																																																																																																																																																																																																																																										
9	43.0	20.28	4.70	35.70	11.91	213.6	37.39	9.141																																																																																																																																																																																																																																																																																																																																																																																										
10	43.4	20.35	4.73	36.01	12.19	213.2	37.72	9.241																																																																																																																																																																																																																																																																																																																																																																																										
11	43.8	20.43	4.75	36.34	12.49	212.7	38.08	9.353																																																																																																																																																																																																																																																																																																																																																																																										
12	44.2	20.52	4.78	36.71	12.84	212.3	38.48	9.478																																																																																																																																																																																																																																																																																																																																																																																										
13	44.6	20.61	4.81	37.11	13.22	211.8	38.92	9.615																																																																																																																																																																																																																																																																																																																																																																																										
14	45.1	20.71	4.85	37.55	13.65	211.2	39.39	9.766																																																																																																																																																																																																																																																																																																																																																																																										
15	45.7	20.82	4.89	38.03	14.13	210.6	39.90	9.930																																																																																																																																																																																																																																																																																																																																																																																										
16	46.3	20.94	4.93	38.54	14.65	210.0	40.46	10.11																																																																																																																																																																																																																																																																																																																																																																																										
17	46.9	21.07	4.97	39.08	15.23	209.3	41.05	10.30																																																																																																																																																																																																																																																																																																																																																																																										
18	47.6	21.20	5.02	39.67	15.86	208.6	41.69	10.52																																																																																																																																																																																																																																																																																																																																																																																										
19	48.3	21.35	5.07	40.29	16.56	207.9	42.36	10.74																																																																																																																																																																																																																																																																																																																																																																																										
20	49.1	21.50	5.12	40.96	17.33	207.1	43.08	10.99																																																																																																																																																																																																																																																																																																																																																																																										
21	49.9	21.66	5.18	41.66	18.17	206.3	43.85	11.26																																																																																																																																																																																																																																																																																																																																																																																										
22	50.7	21.84	5.24	42.41	19.10	205.4	44.66	11.54																																																																																																																																																																																																																																																																																																																																																																																										
23	51.6	22.02	5.30	43.20	20.11	204.5	45.53	11.85																																																																																																																																																																																																																																																																																																																																																																																										
24	52.6	22.22	5.37	44.04	21.23	203.6	46.44	12.18																																																																																																																																																																																																																																																																																																																																																																																										
25	53.6	22.42	5.44	44.92	22.45	202.6	47.40	12.54																																																																																																																																																																																																																																																																																																																																																																																										
26	54.7	22.64	5.52	45.85	23.79	201.7	48.41	12.92																																																																																																																																																																																																																																																																																																																																																																																										
27	55.8	22.87	5.60	46.83	25.27	200.6	49.48	13.33																																																																																																																																																																																																																																																																																																																																																																																										
28	57.0	23.11	5.68	47.86	26.89	199.6	50.61	13.77																																																																																																																																																																																																																																																																																																																																																																																										
29	58.3	23.36	5.77	48.94	28.67	198.5	51.80	14.25																																																																																																																																																																																																																																																																																																																																																																																										
30	59.6	23.63	5.86	50.08	30.63	197.4	53.05	14.76																																																																																																																																																																																																																																																																																																																																																																																										
31	61.0	23.91	5.96	51.28	32.79	196.2	54.36	15.30																																																																																																																																																																																																																																																																																																																																																																																										
32	62.5	24.21	6.06	52.54	35.16	195.0	55.74	15.89																																																																																																																																																																																																																																																																																																																																																																																										
33	64.0	24.52	6.16	53.86	37.79	193.8	57.19	16.52																																																																																																																																																																																																																																																																																																																																																																																										
34	65.6	24.84	6.28	55.24	40.69	192.6	58.71	17.20																																																																																																																																																																																																																																																																																																																																																																																										
35	67.3	25.18	6.40	56.69	43.89	191.3	60.32	17.93																																																																																																																																																																																																																																																																																																																																																																																										
36	69.1	25.54	6.52	58.22	47.44	190.0	62.00	18.71																																																																																																																																																																																																																																																																																																																																																																																										
37	71.0	25.92	6.65	59.82	51.37	188.7	63.77	19.56																																																																																																																																																																																																																																																																																																																																																																																										
38	72.9	26.32	6.79	61.50	55.73	187.3	65.63	20.47																																																																																																																																																																																																																																																																																																																																																																																										
39	75.0	26.74	6.93	63.27	60.57	185.9	67.58	21.45																																																																																																																																																																																																																																																																																																																																																																																										
40	77.2	27.17	7.08	65.12	65.96	184.5	69.63	22.51																																																																																																																																																																																																																																																																																																																																																																																										
11/04/2019	Software use conditions apply							11 / 38																																																																																																																																																																																																																																																																																																																																																																																										

<b>ACB+</b> v.3.08	<b>Trave 1</b>						
<b>SOLLECITAZIONI INTERNE</b>							
<i>Sotto combinazioni di carico elementari</i>							
<i>Carichi permanenti portati (G)</i>							
<b>Reazioni agli appoggi :</b>			Estremità sx : $R_{Av} = 5.00$ kN Estremità dx : $R_{Bv} = 5.00$ kN				
<b>Momento massimo :</b>			$M_{Max} = 8.117$ kNm alla sezione n° 34				
<b>Massima forza di taglio :</b>			$V_{Max} = -4.995$ kN alla sezione n° 1				
	x (m)	M (kNm)	$V_L$ (kN)	$V_R$ (kN)	$N_L$ (kN)	$N_R$ (kN)	
1	0.000	0.000	-	-4.995	-	0.0	
2	0.050	0.248	-4.918	-4.918	0.0	0.0	
3	0.150	0.732	-4.765	-4.765	0.0	0.0	
4	0.250	1.201	-4.611	-4.611	0.0	0.0	
5	0.350	1.654	-4.457	-4.457	0.0	0.0	
6	0.450	2.092	-4.304	-4.304	0.0	0.0	
7	0.550	2.515	-4.150	-4.150	0.0	0.0	
8	0.650	2.922	-3.996	-3.996	0.0	0.0	
9	0.750	3.314	-3.842	-3.842	0.0	0.0	
10	0.850	3.691	-3.689	-3.689	0.0	0.0	
11	0.950	4.052	-3.535	-3.535	0.0	0.0	
12	1.050	4.398	-3.381	-3.381	0.0	0.0	
13	1.150	4.728	-3.228	-3.228	0.0	0.0	
14	1.250	5.043	-3.074	-3.074	0.0	0.0	
15	1.350	5.343	-2.920	-2.920	0.0	0.0	
16	1.450	5.627	-2.767	-2.767	0.0	0.0	
17	1.550	5.896	-2.613	-2.613	0.0	0.0	
18	1.650	6.150	-2.459	-2.459	0.0	0.0	
19	1.750	6.388	-2.305	-2.305	0.0	0.0	
20	1.850	6.611	-2.152	-2.152	0.0	0.0	
21	1.950	6.818	-1.998	-1.998	0.0	0.0	
22	2.050	7.011	-1.844	-1.844	0.0	0.0	
23	2.150	7.187	-1.691	-1.691	0.0	0.0	
24	2.250	7.349	-1.537	-1.537	0.0	0.0	
25	2.350	7.495	-1.383	-1.383	0.0	0.0	
26	2.450	7.625	-1.230	-1.230	0.0	0.0	
27	2.550	7.741	-1.076	-1.076	0.0	0.0	
28	2.650	7.841	-0.922	-0.922	0.0	0.0	
29	2.750	7.925	-0.768	-0.768	0.0	0.0	
11/04/2019	Software use conditions apply					12 / 38	

<b>ACB+</b> v.3.08	<b>Trave 1</b>						
		x (m)	M (kNm)	$V_L$ (kN)	$V_R$ (kN)	$N_L$ (kN)	$N_R$ (kN)
	30	2.850	7.994	-0.615	-0.615	0.0	0.0
	31	2.950	8.048	-0.461	-0.461	0.0	0.0
	32	3.050	8.087	-0.307	-0.307	0.0	0.0
	33	3.150	8.110	-0.154	-0.154	0.0	0.0
	34	3.250	8.117	0.000	0.000	0.0	0.0
	35	3.350	8.110	0.154	0.154	0.0	0.0
	36	3.450	8.087	0.307	0.307	0.0	0.0
	37	3.550	8.048	0.461	0.461	0.0	0.0
	38	3.650	7.994	0.615	0.615	0.0	0.0
	39	3.750	7.925	0.768	0.768	0.0	0.0
	40	3.850	7.841	0.922	0.922	0.0	0.0
	41	3.950	7.741	1.076	1.076	0.0	0.0
	42	4.050	7.625	1.230	1.230	0.0	0.0
	43	4.150	7.495	1.383	1.383	0.0	0.0
	44	4.250	7.349	1.537	1.537	0.0	0.0
	45	4.350	7.187	1.691	1.691	0.0	0.0
	46	4.450	7.011	1.844	1.844	0.0	0.0
	47	4.550	6.818	1.998	1.998	0.0	0.0
	48	4.650	6.611	2.152	2.152	0.0	0.0
	49	4.750	6.388	2.305	2.305	0.0	0.0
	50	4.850	6.150	2.459	2.459	0.0	0.0
	51	4.950	5.896	2.613	2.613	0.0	0.0
	52	5.050	5.627	2.767	2.767	0.0	0.0
	53	5.150	5.343	2.920	2.920	0.0	0.0
	54	5.250	5.043	3.074	3.074	0.0	0.0
	55	5.350	4.728	3.228	3.228	0.0	0.0
	56	5.450	4.398	3.381	3.381	0.0	0.0
	57	5.550	4.052	3.535	3.535	0.0	0.0
	58	5.650	3.691	3.689	3.689	0.0	0.0
	59	5.750	3.314	3.842	3.842	0.0	0.0
	60	5.850	2.922	3.996	3.996	0.0	0.0
	61	5.950	2.515	4.150	4.150	0.0	0.0
	62	6.050	2.092	4.304	4.304	0.0	0.0
	63	6.150	1.654	4.457	4.457	0.0	0.0
	64	6.250	1.201	4.611	4.611	0.0	0.0
	65	6.350	0.732	4.765	4.765	0.0	0.0
	66	6.450	0.248	4.918	4.918	0.0	0.0
	67	6.500	0.000	4.995	-	0.0	-
11/04/2019	Software use conditions apply						13 / 38

<b>ACB+</b> v 3.08	<b>Trave 1</b>					
<b>Carichi accidentali 1 (Q1)</b>						
<b>Reazioni agli appoggi :</b>			Estremità sx : $R_{Av} = 15.60$ kN			
			Estremità dx : $R_{Bv} = 15.60$ kN			
<b>Momento massimo :</b>			$M_{Max} = 25.35$ kNm alla sezione n° 34			
<b>Massima forza di taglio :</b>			$V_{Max} = -15.60$ kN alla sezione n° 1			
	x (m)	M (kNm)	$V_L$ (kN)	$V_R$ (kN)	$N_L$ (kN)	$N_R$ (kN)
1	0.000	0.00	-	-15.60	-	0.0
2	0.050	0.77	-15.36	-15.36	0.0	0.0
3	0.150	2.29	-14.88	-14.88	0.0	0.0
4	0.250	3.75	-14.40	-14.40	0.0	0.0
5	0.350	5.17	-13.92	-13.92	0.0	0.0
6	0.450	6.53	-13.44	-13.44	0.0	0.0
7	0.550	7.85	-12.96	-12.96	0.0	0.0
8	0.650	9.13	-12.48	-12.48	0.0	0.0
9	0.750	10.35	-12.00	-12.00	0.0	0.0
10	0.850	11.53	-11.52	-11.52	0.0	0.0
11	0.950	12.65	-11.04	-11.04	0.0	0.0
12	1.050	13.73	-10.56	-10.56	0.0	0.0
13	1.150	14.77	-10.08	-10.08	0.0	0.0
14	1.250	15.75	-9.60	-9.60	0.0	0.0
15	1.350	16.69	-9.12	-9.12	0.0	0.0
16	1.450	17.57	-8.64	-8.64	0.0	0.0
17	1.550	18.41	-8.16	-8.16	0.0	0.0
18	1.650	19.21	-7.68	-7.68	0.0	0.0
19	1.750	19.95	-7.20	-7.20	0.0	0.0
20	1.850	20.65	-6.72	-6.72	0.0	0.0
21	1.950	21.29	-6.24	-6.24	0.0	0.0
22	2.050	21.89	-5.76	-5.76	0.0	0.0
23	2.150	22.45	-5.28	-5.28	0.0	0.0
24	2.250	22.95	-4.80	-4.80	0.0	0.0
25	2.350	23.41	-4.32	-4.32	0.0	0.0
26	2.450	23.81	-3.84	-3.84	0.0	0.0
27	2.550	24.17	-3.36	-3.36	0.0	0.0
28	2.650	24.49	-2.88	-2.88	0.0	0.0
29	2.750	24.75	-2.40	-2.40	0.0	0.0
30	2.850	24.97	-1.92	-1.92	0.0	0.0
31	2.950	25.13	-1.44	-1.44	0.0	0.0
32	3.050	25.25	-0.96	-0.96	0.0	0.0
33	3.150	25.33	-0.48	-0.48	0.0	0.0

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<b>ACB+</b> v.3.08	<b>Trave 1</b>						
		x (m)	M (kNm)	$V_L$ (kN)	$V_R$ (kN)	$N_L$ (kN)	$N_R$ (kN)
	34	3.250	25.35	0.00	0.00	0.0	0.0
	35	3.350	25.33	0.48	0.48	0.0	0.0
	36	3.450	25.25	0.96	0.96	0.0	0.0
	37	3.550	25.13	1.44	1.44	0.0	0.0
	38	3.650	24.97	1.92	1.92	0.0	0.0
	39	3.750	24.75	2.40	2.40	0.0	0.0
	40	3.850	24.49	2.88	2.88	0.0	0.0
	41	3.950	24.17	3.36	3.36	0.0	0.0
	42	4.050	23.81	3.84	3.84	0.0	0.0
	43	4.150	23.41	4.32	4.32	0.0	0.0
	44	4.250	22.95	4.80	4.80	0.0	0.0
	45	4.350	22.45	5.28	5.28	0.0	0.0
	46	4.450	21.89	5.76	5.76	0.0	0.0
	47	4.550	21.29	6.24	6.24	0.0	0.0
	48	4.650	20.65	6.72	6.72	0.0	0.0
	49	4.750	19.95	7.20	7.20	0.0	0.0
	50	4.850	19.21	7.68	7.68	0.0	0.0
	51	4.950	18.41	8.16	8.16	0.0	0.0
	52	5.050	17.57	8.64	8.64	0.0	0.0
	53	5.150	16.69	9.12	9.12	0.0	0.0
	54	5.250	15.75	9.60	9.60	0.0	0.0
	55	5.350	14.77	10.08	10.08	0.0	0.0
	56	5.450	13.73	10.56	10.56	0.0	0.0
	57	5.550	12.65	11.04	11.04	0.0	0.0
	58	5.650	11.53	11.52	11.52	0.0	0.0
	59	5.750	10.35	12.00	12.00	0.0	0.0
	60	5.850	9.13	12.48	12.48	0.0	0.0
	61	5.950	7.85	12.96	12.96	0.0	0.0
	62	6.050	6.53	13.44	13.44	0.0	0.0
	63	6.150	5.17	13.92	13.92	0.0	0.0
	64	6.250	3.75	14.40	14.40	0.0	0.0
	65	6.350	2.29	14.88	14.88	0.0	0.0
	66	6.450	0.77	15.36	15.36	0.0	0.0
	67	6.500	0.00	15.60	-	0.0	-
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<b>ACB+</b> v.3.08		<b>Trave 1</b>				
<b>Carichi accidentali 2 (Q2)</b>						
<b>Reazioni agli appoggi :</b>		Estremità sx : $R_{Av} = 4.68$ kN Estremità dx : $R_{Bv} = 4.68$ kN				
<b>Momento massimo :</b>		$M_{Max} = 7.605$ kNm alla sezione n° 34				
<b>Massima forza di taglio :</b>		$V_{Max} = -4.680$ kN alla sezione n° 1				
	x (m)	M (kNm)	$V_L$ (kN)	$V_R$ (kN)	$N_L$ (kN)	$N_R$ (kN)
1	0.000	0.000	-	-4.680	-	0.0
2	0.050	0.232	-4.608	-4.608	0.0	0.0
3	0.150	0.686	-4.464	-4.464	0.0	0.0
4	0.250	1.125	-4.320	-4.320	0.0	0.0
5	0.350	1.550	-4.176	-4.176	0.0	0.0
6	0.450	1.960	-4.032	-4.032	0.0	0.0
7	0.550	2.356	-3.888	-3.888	0.0	0.0
8	0.650	2.738	-3.744	-3.744	0.0	0.0
9	0.750	3.105	-3.600	-3.600	0.0	0.0
10	0.850	3.458	-3.456	-3.456	0.0	0.0
11	0.950	3.798	-3.312	-3.312	0.0	0.0
12	1.050	4.120	-3.168	-3.168	0.0	0.0
13	1.150	4.430	-3.024	-3.024	0.0	0.0
14	1.250	4.725	-2.880	-2.880	0.0	0.0
15	1.350	5.006	-2.736	-2.736	0.0	0.0
16	1.450	5.272	-2.592	-2.592	0.0	0.0
17	1.550	5.524	-2.448	-2.448	0.0	0.0
18	1.650	5.762	-2.304	-2.304	0.0	0.0
19	1.750	5.985	-2.160	-2.160	0.0	0.0
20	1.850	6.194	-2.016	-2.016	0.0	0.0
21	1.950	6.388	-1.872	-1.872	0.0	0.0
22	2.050	6.568	-1.728	-1.728	0.0	0.0
23	2.150	6.734	-1.584	-1.584	0.0	0.0
24	2.250	6.885	-1.440	-1.440	0.0	0.0
25	2.350	7.022	-1.296	-1.296	0.0	0.0
26	2.450	7.144	-1.152	-1.152	0.0	0.0
27	2.550	7.252	-1.008	-1.008	0.0	0.0
28	2.650	7.346	-0.864	-0.864	0.0	0.0
29	2.750	7.425	-0.720	-0.720	0.0	0.0
30	2.850	7.490	-0.576	-0.576	0.0	0.0
31	2.950	7.540	-0.432	-0.432	0.0	0.0
32	3.050	7.576	-0.288	-0.288	0.0	0.0
33	3.150	7.598	-0.144	-0.144	0.0	0.0

<b>ACB+</b> v.3.08	<b>Trave 1</b>						
		x (m)	M (kNm)	$V_L$ (kN)	$V_R$ (kN)	$N_L$ (kN)	$N_R$ (kN)
	34	3.250	7.605	0.000	0.000	0.0	0.0
	35	3.350	7.598	0.144	0.144	0.0	0.0
	36	3.450	7.576	0.288	0.288	0.0	0.0
	37	3.550	7.540	0.432	0.432	0.0	0.0
	38	3.650	7.490	0.576	0.576	0.0	0.0
	39	3.750	7.425	0.720	0.720	0.0	0.0
	40	3.850	7.348	0.864	0.864	0.0	0.0
	41	3.950	7.252	1.008	1.008	0.0	0.0
	42	4.050	7.144	1.152	1.152	0.0	0.0
	43	4.150	7.022	1.296	1.296	0.0	0.0
	44	4.250	6.885	1.440	1.440	0.0	0.0
	45	4.350	6.734	1.584	1.584	0.0	0.0
	46	4.450	6.568	1.728	1.728	0.0	0.0
	47	4.550	6.388	1.872	1.872	0.0	0.0
	48	4.650	6.194	2.016	2.016	0.0	0.0
	49	4.750	5.985	2.160	2.160	0.0	0.0
	50	4.850	5.762	2.304	2.304	0.0	0.0
	51	4.950	5.524	2.448	2.448	0.0	0.0
	52	5.050	5.272	2.592	2.592	0.0	0.0
	53	5.150	5.006	2.736	2.736	0.0	0.0
	54	5.250	4.725	2.880	2.880	0.0	0.0
	55	5.350	4.430	3.024	3.024	0.0	0.0
	56	5.450	4.120	3.168	3.168	0.0	0.0
	57	5.550	3.796	3.312	3.312	0.0	0.0
	58	5.650	3.458	3.456	3.456	0.0	0.0
	59	5.750	3.105	3.600	3.600	0.0	0.0
	60	5.850	2.738	3.744	3.744	0.0	0.0
	61	5.950	2.356	3.888	3.888	0.0	0.0
	62	6.050	1.960	4.032	4.032	0.0	0.0
	63	6.150	1.550	4.176	4.176	0.0	0.0
	64	6.250	1.125	4.320	4.320	0.0	0.0
	65	6.350	0.686	4.464	4.464	0.0	0.0
	66	6.450	0.232	4.608	4.608	0.0	0.0
	67	6.500	0.000	4.680	-	0.0	-
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<b>ACB+</b> v 3.08	<b>Trave 1</b>					
<b>Sotto combinazioni SLU</b>						
<b>U1 = 1.35 G + 1.50 Q1 + 0.75 Q2</b>						
<b>Reazioni agli appoggi :</b>			Estremità sx : $R_{Av} = 33.65$ kN Estremità dx : $R_{Bv} = 33.65$ kN			
<b>Momento massimo :</b>			$M_{Max} = 54.69$ kNm alla sezione n° 34			
<b>Massima forza di taglio :</b>			$V_{Max} = -33.65$ kN alla sezione n° 1			
	x (m)	M (kNm)	$V_L$ (kN)	$V_R$ (kN)	$N_L$ (kN)	$N_R$ (kN)
1	0.000	0.00	-	-33.65	-	0.0
2	0.050	1.67	-33.14	-33.14	0.0	0.0
3	0.150	4.93	-32.10	-32.10	0.0	0.0
4	0.250	8.09	-31.06	-31.06	0.0	0.0
5	0.350	11.14	-30.03	-30.03	0.0	0.0
6	0.450	14.10	-28.99	-28.99	0.0	0.0
7	0.550	16.94	-27.96	-27.96	0.0	0.0
8	0.650	19.69	-26.92	-26.92	0.0	0.0
9	0.750	22.33	-25.89	-25.89	0.0	0.0
10	0.850	24.88	-24.85	-24.85	0.0	0.0
11	0.950	27.30	-23.82	-23.82	0.0	0.0
12	1.050	29.63	-22.78	-22.78	0.0	0.0
13	1.150	31.85	-21.75	-21.75	0.0	0.0
14	1.250	33.98	-20.71	-20.71	0.0	0.0
15	1.350	36.00	-19.67	-19.67	0.0	0.0
16	1.450	37.91	-18.64	-18.64	0.0	0.0
17	1.550	39.72	-17.60	-17.60	0.0	0.0
18	1.650	41.43	-16.57	-16.57	0.0	0.0
19	1.750	43.04	-15.53	-15.53	0.0	0.0
20	1.850	44.54	-14.50	-14.50	0.0	0.0
21	1.950	45.94	-13.46	-13.46	0.0	0.0
22	2.050	47.23	-12.43	-12.43	0.0	0.0
23	2.150	48.42	-11.39	-11.39	0.0	0.0
24	2.250	49.51	-10.35	-10.35	0.0	0.0
25	2.350	50.49	-9.32	-9.32	0.0	0.0
26	2.450	51.37	-8.28	-8.28	0.0	0.0
27	2.550	52.15	-7.25	-7.25	0.0	0.0
28	2.650	52.82	-6.21	-6.21	0.0	0.0
29	2.750	53.39	-5.18	-5.18	0.0	0.0
30	2.850	53.86	-4.14	-4.14	0.0	0.0
31	2.950	54.22	-3.11	-3.11	0.0	0.0

<b>ACB+</b> v 3.08	<b>Trave 1</b>					
<p><math>U2 = 1.35 G + 1.05 Q1 + 1.50 Q2</math></p> <p><b>Reazioni agli appoggi :</b>                      Estremità sx: <math>R_{Av} = 30.14</math> kN                  Estremità dx: <math>R_{Bv} = 30.14</math> kN</p> <p><b>Momento massimo :</b>                              <math>M_{Max} = 48.98</math> kNm alla sezione n° 34  <b>Massima forza di taglio :</b>                      <math>V_{Max} = -30.14</math> kN alla sezione n° 1</p>						
	x (m)	M (kNm)	$V_L$ (kN)	$V_R$ (kN)	$N_L$ (kN)	$N_R$ (kN)
1	0.000	0.00	-	-30.14	-	0.0
2	0.050	1.50	-29.68	-29.68	0.0	0.0
3	0.150	4.42	-28.75	-28.75	0.0	0.0
4	0.250	7.25	-27.82	-27.82	0.0	0.0
5	0.350	9.98	-26.90	-26.90	0.0	0.0
6	0.450	12.63	-25.97	-25.97	0.0	0.0
7	0.550	15.18	-25.04	-25.04	0.0	0.0
8	0.650	17.63	-24.11	-24.11	0.0	0.0
9	0.750	20.00	-23.19	-23.19	0.0	0.0
10	0.850	22.27	-22.26	-22.26	0.0	0.0
11	0.950	24.45	-21.33	-21.33	0.0	0.0
12	1.050	26.54	-20.40	-20.40	0.0	0.0
13	1.150	28.53	-19.48	-19.48	0.0	0.0
14	1.250	30.43	-18.55	-18.55	0.0	0.0
15	1.350	32.24	-17.62	-17.62	0.0	0.0
16	1.450	33.96	-16.69	-16.69	0.0	0.0
17	1.550	35.58	-15.77	-15.77	0.0	0.0
18	1.650	37.11	-14.84	-14.84	0.0	0.0
19	1.750	38.55	-13.91	-13.91	0.0	0.0
20	1.850	39.89	-12.98	-12.98	0.0	0.0
21	1.950	41.15	-12.06	-12.06	0.0	0.0
22	2.050	42.31	-11.13	-11.13	0.0	0.0
23	2.150	43.37	-10.20	-10.20	0.0	0.0
24	2.250	44.35	-9.27	-9.27	0.0	0.0
25	2.350	45.23	-8.35	-8.35	0.0	0.0
26	2.450	46.02	-7.42	-7.42	0.0	0.0
27	2.550	46.71	-6.49	-6.49	0.0	0.0
28	2.650	47.31	-5.56	-5.56	0.0	0.0
29	2.750	47.82	-4.64	-4.64	0.0	0.0
30	2.850	48.24	-3.71	-3.71	0.0	0.0
31	2.950	48.57	-2.78	-2.78	0.0	0.0
32	3.050	48.80	-1.85	-1.85	0.0	0.0
33	3.150	48.94	-0.93	-0.93	0.0	0.0

<b>ACB+</b> v 3.08	<b>Trave 1</b>					
		x (m)	M (kNm)	V <sub>L</sub> (kN)	V <sub>R</sub> (kN)	N <sub>L</sub> (kN)
34	3.250	48.98	0.00	0.00	0.0	0.0
35	3.350	48.94	0.93	0.93	0.0	0.0
36	3.450	48.80	1.85	1.85	0.0	0.0
37	3.550	48.57	2.78	2.78	0.0	0.0
38	3.650	48.24	3.71	3.71	0.0	0.0
39	3.750	47.82	4.64	4.64	0.0	0.0
40	3.850	47.31	5.56	5.56	0.0	0.0
41	3.950	46.71	6.49	6.49	0.0	0.0
42	4.050	46.02	7.42	7.42	0.0	0.0
43	4.150	45.23	8.35	8.35	0.0	0.0
44	4.250	44.35	9.27	9.27	0.0	0.0
45	4.350	43.37	10.20	10.20	0.0	0.0
46	4.450	42.31	11.13	11.13	0.0	0.0
47	4.550	41.15	12.06	12.06	0.0	0.0
48	4.650	39.89	12.98	12.98	0.0	0.0
49	4.750	38.55	13.91	13.91	0.0	0.0
50	4.850	37.11	14.84	14.84	0.0	0.0
51	4.950	35.58	15.77	15.77	0.0	0.0
52	5.050	33.96	16.69	16.69	0.0	0.0
53	5.150	32.24	17.62	17.62	0.0	0.0
54	5.250	30.43	18.55	18.55	0.0	0.0
55	5.350	28.53	19.48	19.48	0.0	0.0
56	5.450	26.54	20.40	20.40	0.0	0.0
57	5.550	24.45	21.33	21.33	0.0	0.0
58	5.650	22.27	22.26	22.26	0.0	0.0
59	5.750	20.00	23.19	23.19	0.0	0.0
60	5.850	17.63	24.11	24.11	0.0	0.0
61	5.950	15.18	25.04	25.04	0.0	0.0
62	6.050	12.63	25.97	25.97	0.0	0.0
63	6.150	9.98	26.90	26.90	0.0	0.0
64	6.250	7.25	27.82	27.82	0.0	0.0
65	6.350	4.42	28.75	28.75	0.0	0.0
66	6.450	1.50	29.68	29.68	0.0	0.0
67	6.500	0.00	30.14	-	0.0	-

Alveolo	Sez.	N <sub>m,top</sub> (kN)	N <sub>m,bot</sub> (kN)	V <sub>m,top</sub> (kN)	V <sub>m,bot</sub> (kN)
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Alveolo	Sez.	N <sub>m,top</sub> (kN)	N <sub>m,bot</sub> (kN)	V <sub>m,top</sub> (kN)	V <sub>m,bot</sub> (kN)
1	3	20.182	-20.182	-14.376	-14.376
2	5	45.609	-45.609	-13.449	-13.449
3	7	69.340	-69.340	-12.521	-12.521
4	9	91.376	-91.376	-11.594	-11.594
5	11	111.718	-111.718	-10.666	-10.666
6	13	130.364	-130.364	-9.739	-9.739
7	15	147.315	-147.315	-8.811	-8.811
8	17	162.570	-162.570	-7.884	-7.884
9	19	176.131	-176.131	-6.956	-6.956
10	21	187.997	-187.997	-6.029	-6.029
11	23	198.167	-198.167	-5.101	-5.101
12	25	206.643	-206.643	-4.174	-4.174
13	27	213.423	-213.423	-3.246	-3.246
14	29	218.509	-218.509	-2.319	-2.319
15	31	221.899	-221.899	-1.391	-1.391
16	33	223.594	-223.594	-0.464	-0.464
17	35	223.594	-223.594	0.464	0.464
18	37	221.899	-221.899	1.391	1.391
19	39	218.509	-218.509	2.319	2.319
20	41	213.423	-213.423	3.246	3.246
21	43	206.643	-206.643	4.174	4.174
22	45	198.167	-198.167	5.101	5.101
23	47	187.997	-187.997	6.029	6.029
24	49	176.131	-176.131	6.956	6.956
25	51	162.570	-162.570	7.884	7.884
26	53	147.315	-147.315	8.811	8.811
27	55	130.364	-130.364	9.739	9.739
28	57	111.718	-111.718	10.666	10.666
29	59	91.376	-91.376	11.594	11.594
30	61	69.340	-69.340	12.521	12.521
31	63	45.609	-45.609	13.449	13.449
32	65	20.182	-20.182	14.376	14.376

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<p><b><u>STATO LIMITE ULTIMO (SLU)</u></b></p> <p><b><u>Nota: il metodo di calcolo utilizzato è valido solo per profili in acciaio laminati a caldo.</u></b></p> <p><b>Sommario delle verifiche</b></p> <p>SI = Verificato NO = Non verificato</p> <p><b>Verifiche per le sezioni nette all'asse alveoli</b></p> <table> <tr> <td>Resistenza al momento flessionale (Alv. n° 32 - Comb. U1) :</td> <td><math>\Gamma_{M,max}</math></td> <td>= 0.268</td> <td>&lt; 1</td> <td>SI</td> </tr> <tr> <td>Resistenza alla forza assiale (Alv. n° 16 - Comb. U1) :</td> <td><math>\Gamma_{N,max}</math></td> <td>= 0.477</td> <td>&lt; 1</td> <td>SI</td> </tr> <tr> <td>Resistenza alla forza di taglio (Alv. n° 14 - Comb. U1) :</td> <td><math>\Gamma_{V,max}</math></td> <td>= 0.400</td> <td>&lt; 1</td> <td>SI</td> </tr> <tr> <td>Resistenza all'interazione M+N (Alv. n° 20 - Comb. U1) :</td> <td><math>\Gamma_{MN,max}</math></td> <td>= 0.485</td> <td>&lt; 1</td> <td>SI</td> </tr> <tr> <td>Resistenza all'interazione N+V (Alv. n° 16 - Comb. U1) :</td> <td><math>\Gamma_{NV,max}</math></td> <td>= 0.477</td> <td>&lt; 1</td> <td>SI</td> </tr> <tr> <td>Resistenza all'interazione M+V (Alv. n° 32 - Comb. U1) :</td> <td><math>\Gamma_{MV,max}</math></td> <td>= 0.268</td> <td>&lt; 1</td> <td>SI</td> </tr> <tr> <td>Resistenza all'interazione M+N+V (Alv. n° 20 - Comb. U1) :</td> <td><math>\Gamma_{MNV,max}</math></td> <td>= 0.485</td> <td>&lt; 1</td> <td>SI</td> </tr> </table> <p><b>Verifiche per l'anima</b></p> <p>A seguito della snellezza dell'anima la verifica d'instabilità a taglio non è necessaria (<math>h_w / t_w &lt; 72 \epsilon_f</math>)</p> <p><b>Verifiche per i montanti</b></p> <table> <tr> <td>Resistenza al taglio (Mont. n° 1 - Comb. U1) :</td> <td><math>\Gamma_{Vh,max}</math></td> <td>= 0.626</td> <td>&lt; 1</td> <td>SI</td> </tr> <tr> <td>Resistenza all'instabilità (Mont. n° 31 - Comb. U1) :</td> <td><math>\Gamma_{b,max}</math></td> <td>= 0.575</td> <td>&lt; 1</td> <td>SI</td> </tr> <tr> <td>Spessore minimo gola saldatura (Mont. n° 31 - Comb. U1) :</td> <td><math>a_{min}</math></td> <td>= 1.21 mm</td> <td></td> <td></td> </tr> </table> <p>Attenzione: l'altezza di gola è calcolata assumendo 2 cordoni di saldatura Lo spessore totale della saldatura deve essere minimo di 2.43 mm Attenzione : lo spessore della gola della saldatura a cordone deve essere minimo di 3 mm (EC3)</p> <p><b>Verifiche per le sezioni lorde (piene)</b></p> <table> <tr> <td>Resistenza alla flessione (Mont. n° 16 - Comb. U1) :</td> <td><math>\Gamma_{Mg,max}</math></td> <td>= 0.443 (Classe 1)</td> <td>&lt; 1</td> <td>SI</td> </tr> <tr> <td>Resistenza al taglio (Estremità sx - Comb. U1) :</td> <td><math>\Gamma_{Vg,max}</math></td> <td>= 0.122</td> <td>&lt; 1</td> <td>SI</td> </tr> </table> <p><b>Altre verifiche</b></p> <table> <tr> <td>Resistenza all'instabilità flessio-torsionale (LTB)</td> <td><math>\Gamma_{LT,max}</math></td> <td>= 0.642</td> <td>&lt; 1</td> <td>SI</td> </tr> </table>		Resistenza al momento flessionale (Alv. n° 32 - Comb. U1) :	$\Gamma_{M,max}$	= 0.268	< 1	SI	Resistenza alla forza assiale (Alv. n° 16 - Comb. U1) :	$\Gamma_{N,max}$	= 0.477	< 1	SI	Resistenza alla forza di taglio (Alv. n° 14 - Comb. U1) :	$\Gamma_{V,max}$	= 0.400	< 1	SI	Resistenza all'interazione M+N (Alv. n° 20 - Comb. U1) :	$\Gamma_{MN,max}$	= 0.485	< 1	SI	Resistenza all'interazione N+V (Alv. n° 16 - Comb. U1) :	$\Gamma_{NV,max}$	= 0.477	< 1	SI	Resistenza all'interazione M+V (Alv. n° 32 - Comb. U1) :	$\Gamma_{MV,max}$	= 0.268	< 1	SI	Resistenza all'interazione M+N+V (Alv. n° 20 - Comb. U1) :	$\Gamma_{MNV,max}$	= 0.485	< 1	SI	Resistenza al taglio (Mont. n° 1 - Comb. U1) :	$\Gamma_{Vh,max}$	= 0.626	< 1	SI	Resistenza all'instabilità (Mont. n° 31 - Comb. U1) :	$\Gamma_{b,max}$	= 0.575	< 1	SI	Spessore minimo gola saldatura (Mont. n° 31 - Comb. U1) :	$a_{min}$	= 1.21 mm			Resistenza alla flessione (Mont. n° 16 - Comb. U1) :	$\Gamma_{Mg,max}$	= 0.443 (Classe 1)	< 1	SI	Resistenza al taglio (Estremità sx - Comb. U1) :	$\Gamma_{Vg,max}$	= 0.122	< 1	SI	Resistenza all'instabilità flessio-torsionale (LTB)	$\Gamma_{LT,max}$	= 0.642	< 1	SI
Resistenza al momento flessionale (Alv. n° 32 - Comb. U1) :	$\Gamma_{M,max}$	= 0.268	< 1	SI																																																														
Resistenza alla forza assiale (Alv. n° 16 - Comb. U1) :	$\Gamma_{N,max}$	= 0.477	< 1	SI																																																														
Resistenza alla forza di taglio (Alv. n° 14 - Comb. U1) :	$\Gamma_{V,max}$	= 0.400	< 1	SI																																																														
Resistenza all'interazione M+N (Alv. n° 20 - Comb. U1) :	$\Gamma_{MN,max}$	= 0.485	< 1	SI																																																														
Resistenza all'interazione N+V (Alv. n° 16 - Comb. U1) :	$\Gamma_{NV,max}$	= 0.477	< 1	SI																																																														
Resistenza all'interazione M+V (Alv. n° 32 - Comb. U1) :	$\Gamma_{MV,max}$	= 0.268	< 1	SI																																																														
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Resistenza all'instabilità flessio-torsionale (LTB)	$\Gamma_{LT,max}$	= 0.642	< 1	SI																																																														
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<b>ACB+</b> v 3.08		<b>Trave 1</b>							
<b>Verifiche alle combinazioni SLU</b>									
<b>Combinazione allo SLU U1      U1 = 1.35 G + 1.50 Q1 + 0.75 Q2</b>									
<b>Verifiche nelle sezioni all'asse degli alveoli</b>									
Alv.	Corr.	Classe	$\Gamma_N$	$\Gamma_V$	$\Gamma_M$	$\Gamma_{NV}$	$\Gamma_{MN}$	$\Gamma_{MV}$	$\Gamma_{MNV}$
1	Sup.	2	0.048 (16°)	0.235 (-7°)	0.268 (-32°)	0.048 (16°)	0.298 (31°)	0.268 (-32°)	0.298 (31°)
	Inf.	1	0.048 (-16°)	0.235 (7°)	0.268 (32°)	0.048 (-16°)	0.298 (-31°)	0.268 (32°)	0.298 (-31°)
2	Sup.	2	0.099 (8°)	0.238 (-15°)	0.260 (-33°)	0.099 (8°)	0.317 (-29°)	0.260 (-33°)	0.317 (-29°)
	Inf.	1	0.099 (-8°)	0.238 (15°)	0.260 (33°)	0.099 (-8°)	0.317 (29°)	0.260 (33°)	0.317 (29°)
3	Sup.	2	0.149 (5°)	0.251 (-22°)	0.251 (-33°)	0.149 (5°)	0.346 (-28°)	0.251 (-33°)	0.346 (-28°)
	Inf.	1	0.149 (-5°)	0.251 (22°)	0.251 (33°)	0.149 (-5°)	0.346 (28°)	0.251 (33°)	0.346 (28°)
4	Sup.	2	0.196 (3°)	0.270 (-27°)	0.242 (-34°)	0.196 (3°)	0.373 (-27°)	0.242 (-34°)	0.373 (-27°)
	Inf.	1	0.196 (-3°)	0.270 (27°)	0.242 (34°)	0.196 (-3°)	0.373 (27°)	0.242 (34°)	0.373 (27°)
5	Sup.	2	0.239 (3°)	0.291 (-31°)	0.233 (-34°)	0.239 (3°)	0.397 (-26°)	0.233 (-34°)	0.397 (-26°)
	Inf.	1	0.239 (-3°)	0.291 (31°)	0.233 (34°)	0.239 (-3°)	0.397 (26°)	0.233 (34°)	0.397 (26°)
6	Sup.	2	0.278 (2°)	0.312 (-33°)	0.223 (-35°)	0.278 (2°)	0.418 (-26°)	0.223 (-35°)	0.418 (-26°)
	Inf.	1	0.278 (-2°)	0.312 (33°)	0.223 (35°)	0.278 (-2°)	0.418 (26°)	0.223 (35°)	0.418 (26°)
7	Sup.	2	0.314 (2°)	0.331 (-35°)	0.213 (-36°)	0.314 (2°)	0.436 (-25°)	0.213 (-36°)	0.436 (-25°)
	Inf.	1	0.314 (-2°)	0.331 (35°)	0.213 (36°)	0.314 (-2°)	0.436 (25°)	0.213 (36°)	0.436 (25°)
8	Sup.	2	0.347 (1°)	0.349 (-37°)	0.202 (-36°)	0.347 (1°)	0.451 (-24°)	0.202 (-36°)	0.451 (-24°)
	Inf.	1	0.347 (-1°)	0.349 (37°)	0.202 (36°)	0.347 (-1°)	0.451 (24°)	0.202 (36°)	0.451 (24°)
9	Sup.	2	0.376 (1°)	0.364 (-38°)	0.191 (-37°)	0.376 (1°)	0.464 (-23°)	0.191 (-37°)	0.464 (-23°)
	Inf.	1	0.376 (-1°)	0.364 (38°)	0.191 (37°)	0.376 (-1°)	0.464 (23°)	0.191 (37°)	0.464 (23°)
10	Sup.	2	0.401 (1°)	0.377 (-39°)	0.179 (-37°)	0.401 (1°)	0.473 (-21°)	0.179 (-37°)	0.473 (-21°)
	Inf.	1	0.401 (-1°)	0.377 (39°)	0.179 (37°)	0.401 (-1°)	0.473 (21°)	0.179 (37°)	0.473 (21°)
11	Sup.	2	0.423 (1°)	0.387 (-40°)	0.166 (-38°)	0.423 (1°)	0.480 (-20°)	0.166 (-38°)	0.480 (-20°)
	Inf.	1	0.423 (-1°)	0.387 (40°)	0.166 (38°)	0.423 (-1°)	0.480 (20°)	0.166 (38°)	0.480 (20°)
12	Sup.	2	0.441 (1°)	0.394 (-40°)	0.153 (-39°)	0.441 (1°)	0.484 (-19°)	0.153 (-39°)	0.484 (-19°)
	Inf.	1	0.441 (-1°)	0.394 (40°)	0.153 (39°)	0.441 (-1°)	0.484 (19°)	0.153 (39°)	0.484 (19°)
13	Sup.	2	0.455 (0°)	0.399 (-40°)	0.140 (-39°)	0.455 (0°)	0.485 (-17°)	0.140 (-39°)	0.485 (-17°)
	Inf.	1	0.455 (0°)	0.399 (40°)	0.140 (39°)	0.455 (0°)	0.485 (17°)	0.140 (39°)	0.485 (17°)
14	Sup.	2	0.466 (0°)	0.400 (-40°)	0.126 (-40°)	0.466 (0°)	0.484 (-15°)	0.126 (-40°)	0.484 (-15°)
	Inf.	1	0.466 (0°)	0.400 (40°)	0.126 (40°)	0.466 (0°)	0.484 (15°)	0.126 (40°)	0.484 (15°)
15	Sup.	2	0.473 (0°)	0.399 (-40°)	0.112 (-40°)	0.473 (0°)	0.481 (-11°)	0.112 (-40°)	0.481 (-11°)
	Inf.	1	0.473 (0°)	0.399 (40°)	0.112 (40°)	0.473 (0°)	0.481 (11°)	0.112 (40°)	0.481 (11°)
16	Sup.	2	0.477 (0°)	0.394 (-40°)	0.097 (-40°)	0.477 (0°)	0.478 (-5°)	0.097 (-40°)	0.478 (-5°)
	Inf.	1	0.477 (0°)	0.394 (40°)	0.097 (40°)	0.477 (0°)	0.478 (5°)	0.097 (40°)	0.478 (5°)
17	Sup.	2	0.477 (0°)	0.394 (40°)	0.097 (40°)	0.477 (0°)	0.478 (5°)	0.097 (40°)	0.478 (5°)
	Inf.	1	0.477 (0°)	0.394 (-40°)	0.097 (-40°)	0.477 (0°)	0.478 (-5°)	0.097 (-40°)	0.478 (-5°)
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Alv.	Corr.	Classe	$\Gamma_N$	$\Gamma_V$	$\Gamma_M$	$\Gamma_{NV}$	$\Gamma_{MN}$	$\Gamma_{MV}$	$\Gamma_{MNV}$
18	Sup.	2	0.473 (0°)	0.399 (40°)	0.112 (40°)	0.473 (0°)	0.481 (11°)	0.112 (40°)	0.481 (11°)
	Inf.	1	0.473 (0°)	0.399 (-40°)	0.112 (-40°)	0.473 (0°)	0.481 (-11°)	0.112 (-40°)	0.481 (-11°)
19	Sup.	2	0.466 (0°)	0.400 (40°)	0.126 (40°)	0.466 (0°)	0.484 (15°)	0.126 (40°)	0.484 (15°)
	Inf.	1	0.466 (0°)	0.400 (-40°)	0.126 (-40°)	0.466 (0°)	0.484 (-15°)	0.126 (-40°)	0.484 (-15°)
20	Sup.	2	0.455 (0°)	0.399 (40°)	0.140 (39°)	0.455 (0°)	0.485 (17°)	0.140 (39°)	0.485 (17°)
	Inf.	1	0.455 (0°)	0.399 (-40°)	0.140 (-39°)	0.455 (0°)	0.485 (-17°)	0.140 (-39°)	0.485 (-17°)
21	Sup.	2	0.441 (-1°)	0.394 (40°)	0.153 (39°)	0.441 (-1°)	0.484 (19°)	0.153 (39°)	0.484 (19°)
	Inf.	1	0.441 (1°)	0.394 (-40°)	0.153 (-39°)	0.441 (1°)	0.484 (-19°)	0.153 (-39°)	0.484 (-19°)
22	Sup.	2	0.423 (-1°)	0.387 (40°)	0.166 (38°)	0.423 (-1°)	0.480 (20°)	0.166 (38°)	0.480 (20°)
	Inf.	1	0.423 (1°)	0.387 (-40°)	0.166 (-38°)	0.423 (1°)	0.480 (-20°)	0.166 (-38°)	0.480 (-20°)
23	Sup.	2	0.401 (-1°)	0.377 (39°)	0.179 (37°)	0.401 (-1°)	0.473 (21°)	0.179 (37°)	0.473 (21°)
	Inf.	1	0.401 (1°)	0.377 (-39°)	0.179 (-37°)	0.401 (1°)	0.473 (-21°)	0.179 (-37°)	0.473 (-21°)
24	Sup.	2	0.376 (-1°)	0.364 (38°)	0.191 (37°)	0.376 (-1°)	0.464 (23°)	0.191 (37°)	0.464 (23°)
	Inf.	1	0.376 (1°)	0.364 (-38°)	0.191 (-37°)	0.376 (1°)	0.464 (-23°)	0.191 (-37°)	0.464 (-23°)
25	Sup.	2	0.347 (-1°)	0.349 (37°)	0.202 (36°)	0.347 (-1°)	0.451 (24°)	0.202 (36°)	0.451 (24°)
	Inf.	1	0.347 (1°)	0.349 (-37°)	0.202 (-36°)	0.347 (1°)	0.451 (-24°)	0.202 (-36°)	0.451 (-24°)
26	Sup.	2	0.314 (-2°)	0.331 (35°)	0.213 (36°)	0.314 (-2°)	0.436 (25°)	0.213 (36°)	0.436 (25°)
	Inf.	1	0.314 (2°)	0.331 (-35°)	0.213 (-36°)	0.314 (2°)	0.436 (-25°)	0.213 (-36°)	0.436 (-25°)
27	Sup.	2	0.278 (-2°)	0.312 (33°)	0.223 (35°)	0.278 (-2°)	0.418 (26°)	0.223 (35°)	0.418 (26°)
	Inf.	1	0.278 (2°)	0.312 (-33°)	0.223 (-35°)	0.278 (2°)	0.418 (-26°)	0.223 (-35°)	0.418 (-26°)
28	Sup.	2	0.239 (-3°)	0.291 (31°)	0.233 (34°)	0.239 (-3°)	0.397 (26°)	0.233 (34°)	0.397 (26°)
	Inf.	1	0.239 (3°)	0.291 (-31°)	0.233 (-34°)	0.239 (3°)	0.397 (-26°)	0.233 (-34°)	0.397 (-26°)
29	Sup.	2	0.196 (-3°)	0.270 (27°)	0.242 (34°)	0.196 (-3°)	0.373 (27°)	0.242 (34°)	0.373 (27°)
	Inf.	1	0.196 (3°)	0.270 (-27°)	0.242 (-34°)	0.196 (3°)	0.373 (-27°)	0.242 (-34°)	0.373 (-27°)
30	Sup.	2	0.149 (-5°)	0.251 (22°)	0.251 (33°)	0.149 (-5°)	0.346 (28°)	0.251 (33°)	0.346 (28°)
	Inf.	1	0.149 (5°)	0.251 (-22°)	0.251 (-33°)	0.149 (5°)	0.346 (-28°)	0.251 (-33°)	0.346 (-28°)
31	Sup.	2	0.099 (-8°)	0.238 (15°)	0.260 (33°)	0.099 (-8°)	0.317 (29°)	0.260 (33°)	0.317 (29°)
	Inf.	1	0.099 (8°)	0.238 (-15°)	0.260 (-33°)	0.099 (8°)	0.317 (-29°)	0.260 (-33°)	0.317 (-29°)
32	Sup.	2	0.048 (-16°)	0.235 (7°)	0.268 (32°)	0.048 (-16°)	0.298 (-31°)	0.268 (32°)	0.298 (-31°)
	Inf.	1	0.048 (16°)	0.235 (-7°)	0.268 (-32°)	0.048 (16°)	0.298 (31°)	0.268 (-32°)	0.298 (31°)

**Verifiche nelle sezioni di montante**

Mont.	$\Gamma_{Vh}$	$\Gamma_b$
1	0.63	0.58
2	0.58	0.54
3	0.54	0.50
4	0.50	0.46
5	0.46	0.42

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<table border="1"> <thead> <tr> <th>Mont.</th> <th><math>T_{vh}</math></th> <th><math>T_b</math></th> </tr> </thead> <tbody> <tr><td>6</td><td>0.42</td><td>0.38</td></tr> <tr><td>7</td><td>0.38</td><td>0.35</td></tr> <tr><td>8</td><td>0.33</td><td>0.31</td></tr> <tr><td>9</td><td>0.29</td><td>0.27</td></tr> <tr><td>10</td><td>0.25</td><td>0.23</td></tr> <tr><td>11</td><td>0.21</td><td>0.19</td></tr> <tr><td>12</td><td>0.17</td><td>0.16</td></tr> <tr><td>13</td><td>0.13</td><td>0.12</td></tr> <tr><td>14</td><td>0.08</td><td>0.09</td></tr> <tr><td>15</td><td>0.04</td><td>0.05</td></tr> <tr><td>16</td><td>0.00</td><td>0.00</td></tr> <tr><td>17</td><td>0.04</td><td>0.05</td></tr> <tr><td>18</td><td>0.08</td><td>0.09</td></tr> <tr><td>19</td><td>0.13</td><td>0.12</td></tr> <tr><td>20</td><td>0.17</td><td>0.16</td></tr> <tr><td>21</td><td>0.21</td><td>0.19</td></tr> <tr><td>22</td><td>0.25</td><td>0.23</td></tr> <tr><td>23</td><td>0.29</td><td>0.27</td></tr> <tr><td>24</td><td>0.33</td><td>0.31</td></tr> <tr><td>25</td><td>0.38</td><td>0.35</td></tr> <tr><td>26</td><td>0.42</td><td>0.38</td></tr> <tr><td>27</td><td>0.46</td><td>0.42</td></tr> <tr><td>28</td><td>0.50</td><td>0.46</td></tr> <tr><td>29</td><td>0.54</td><td>0.50</td></tr> <tr><td>30</td><td>0.58</td><td>0.54</td></tr> <tr><td>31</td><td>0.63</td><td>0.58</td></tr> </tbody> </table>	Mont.	$T_{vh}$	$T_b$	6	0.42	0.38	7	0.38	0.35	8	0.33	0.31	9	0.29	0.27	10	0.25	0.23	11	0.21	0.19	12	0.17	0.16	13	0.13	0.12	14	0.08	0.09	15	0.04	0.05	16	0.00	0.00	17	0.04	0.05	18	0.08	0.09	19	0.13	0.12	20	0.17	0.16	21	0.21	0.19	22	0.25	0.23	23	0.29	0.27	24	0.33	0.31	25	0.38	0.35	26	0.42	0.38	27	0.46	0.42	28	0.50	0.46	29	0.54	0.50	30	0.58	0.54	31	0.63	0.58		
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 v 3.08		Trave 1							
		Combinazione allo SLU U2 $U2 = 1.35 G + 1.05 Q1 + 1.50 Q2$							
Verifiche nelle sezioni all'asse degli alveoli									
Alv.	Corr.	Classe	$\Gamma_N$	$\Gamma_V$	$\Gamma_M$	$\Gamma_{NV}$	$\Gamma_{MN}$	$\Gamma_{MV}$	$\Gamma_{MNV}$
1	Sup.	2	0.043 (16°)	0.211 (-7°)	0.240 (-32°)	0.043 (16°)	0.267 (31°)	0.240 (-32°)	0.267 (31°)
	Inf.	1	0.043 (-16°)	0.211 (7°)	0.240 (32°)	0.043 (-16°)	0.267 (-31°)	0.240 (32°)	0.267 (-31°)
2	Sup.	2	0.089 (8°)	0.213 (-15°)	0.233 (-33°)	0.089 (8°)	0.284 (-29°)	0.233 (-33°)	0.284 (-29°)
	Inf.	1	0.089 (-8°)	0.213 (15°)	0.233 (33°)	0.089 (-8°)	0.284 (29°)	0.233 (33°)	0.284 (29°)
3	Sup.	2	0.133 (5°)	0.225 (-22°)	0.225 (-33°)	0.133 (5°)	0.310 (-28°)	0.225 (-33°)	0.310 (-28°)
	Inf.	1	0.133 (-5°)	0.225 (22°)	0.225 (33°)	0.133 (-5°)	0.310 (28°)	0.225 (33°)	0.310 (28°)
4	Sup.	2	0.175 (3°)	0.242 (-27°)	0.217 (-34°)	0.175 (3°)	0.334 (-27°)	0.217 (-34°)	0.334 (-27°)
	Inf.	1	0.175 (-3°)	0.242 (27°)	0.217 (34°)	0.175 (-3°)	0.334 (27°)	0.217 (34°)	0.334 (27°)
5	Sup.	2	0.214 (3°)	0.261 (-31°)	0.209 (-34°)	0.214 (3°)	0.355 (-26°)	0.209 (-34°)	0.355 (-26°)
	Inf.	1	0.214 (-3°)	0.261 (31°)	0.209 (34°)	0.214 (-3°)	0.355 (26°)	0.209 (34°)	0.355 (26°)
6	Sup.	2	0.249 (2°)	0.279 (-33°)	0.200 (-35°)	0.249 (2°)	0.374 (-26°)	0.200 (-35°)	0.374 (-26°)
	Inf.	1	0.249 (-2°)	0.279 (33°)	0.200 (35°)	0.249 (-2°)	0.374 (26°)	0.200 (35°)	0.374 (26°)
7	Sup.	2	0.282 (2°)	0.297 (-35°)	0.191 (-36°)	0.282 (2°)	0.391 (-25°)	0.191 (-36°)	0.391 (-25°)
	Inf.	1	0.282 (-2°)	0.297 (35°)	0.191 (36°)	0.282 (-2°)	0.391 (25°)	0.191 (36°)	0.391 (25°)
8	Sup.	2	0.311 (1°)	0.312 (-37°)	0.181 (-38°)	0.311 (1°)	0.404 (-24°)	0.181 (-38°)	0.404 (-24°)
	Inf.	1	0.311 (-1°)	0.312 (37°)	0.181 (38°)	0.311 (-1°)	0.404 (24°)	0.181 (38°)	0.404 (24°)
9	Sup.	2	0.337 (1°)	0.326 (-38°)	0.171 (-37°)	0.337 (1°)	0.415 (-23°)	0.171 (-37°)	0.415 (-23°)
	Inf.	1	0.337 (-1°)	0.326 (38°)	0.171 (37°)	0.337 (-1°)	0.415 (23°)	0.171 (37°)	0.415 (23°)
10	Sup.	2	0.359 (1°)	0.337 (-39°)	0.160 (-37°)	0.359 (1°)	0.424 (-21°)	0.160 (-37°)	0.424 (-21°)
	Inf.	1	0.359 (-1°)	0.337 (39°)	0.160 (37°)	0.359 (-1°)	0.424 (21°)	0.160 (37°)	0.424 (21°)
11	Sup.	2	0.379 (1°)	0.346 (-40°)	0.149 (-38°)	0.379 (1°)	0.430 (-20°)	0.149 (-38°)	0.430 (-20°)
	Inf.	1	0.379 (-1°)	0.346 (40°)	0.149 (38°)	0.379 (-1°)	0.430 (20°)	0.149 (38°)	0.430 (20°)
12	Sup.	2	0.395 (1°)	0.353 (-40°)	0.137 (-39°)	0.395 (1°)	0.434 (-19°)	0.137 (-39°)	0.434 (-19°)
	Inf.	1	0.395 (-1°)	0.353 (40°)	0.137 (39°)	0.395 (-1°)	0.434 (19°)	0.137 (39°)	0.434 (19°)
13	Sup.	2	0.408 (0°)	0.357 (-40°)	0.125 (-39°)	0.408 (0°)	0.435 (-17°)	0.125 (-39°)	0.435 (-17°)
	Inf.	1	0.408 (0°)	0.357 (40°)	0.125 (39°)	0.408 (0°)	0.435 (17°)	0.125 (39°)	0.435 (17°)
14	Sup.	2	0.417 (0°)	0.358 (-40°)	0.113 (-40°)	0.417 (0°)	0.434 (-15°)	0.113 (-40°)	0.434 (-15°)
	Inf.	1	0.417 (0°)	0.358 (40°)	0.113 (40°)	0.417 (0°)	0.434 (15°)	0.113 (40°)	0.434 (15°)
15	Sup.	2	0.424 (0°)	0.357 (-40°)	0.100 (-40°)	0.424 (0°)	0.431 (-11°)	0.100 (-40°)	0.431 (-11°)
	Inf.	1	0.424 (0°)	0.357 (40°)	0.100 (40°)	0.424 (0°)	0.431 (11°)	0.100 (40°)	0.431 (11°)
16	Sup.	2	0.427 (0°)	0.353 (-40°)	0.087 (-40°)	0.427 (0°)	0.428 (-5°)	0.087 (-40°)	0.428 (-5°)
	Inf.	1	0.427 (0°)	0.353 (40°)	0.087 (40°)	0.427 (0°)	0.428 (5°)	0.087 (40°)	0.428 (5°)
17	Sup.	2	0.427 (0°)	0.353 (40°)	0.087 (40°)	0.427 (0°)	0.428 (5°)	0.087 (40°)	0.428 (5°)
	Inf.	1	0.427 (0°)	0.353 (-40°)	0.087 (-40°)	0.427 (0°)	0.428 (-5°)	0.087 (-40°)	0.428 (-5°)
18	Sup.	2	0.424 (0°)	0.357 (40°)	0.100 (40°)	0.424 (0°)	0.431 (11°)	0.100 (40°)	0.431 (11°)
	Inf.	1	0.424 (0°)	0.357 (-40°)	0.100 (-40°)	0.424 (0°)	0.431 (-11°)	0.100 (-40°)	0.431 (-11°)
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ACB+		Trave 1							
v 3.08									
Alv.	Corr.	Classe	$\Gamma_N$	$\Gamma_V$	$\Gamma_M$	$\Gamma_{NV}$	$\Gamma_{MN}$	$\Gamma_{MV}$	$\Gamma_{MNV}$
19	Sup.	2	0.417 (0°)	0.358 (40°)	0.113 (40°)	0.417 (0°)	0.434 (15°)	0.113 (40°)	0.434 (15°)
	Inf.	1	0.417 (0°)	0.358 (-40°)	0.113 (-40°)	0.417 (0°)	0.434 (-15°)	0.113 (-40°)	0.434 (-15°)
20	Sup.	2	0.408 (0°)	0.357 (40°)	0.125 (39°)	0.408 (0°)	0.435 (17°)	0.125 (39°)	0.435 (17°)
	Inf.	1	0.408 (0°)	0.357 (-40°)	0.125 (-39°)	0.408 (0°)	0.435 (-17°)	0.125 (-39°)	0.435 (-17°)
21	Sup.	2	0.395 (-1°)	0.353 (40°)	0.137 (39°)	0.395 (-1°)	0.434 (19°)	0.137 (39°)	0.434 (19°)
	Inf.	1	0.395 (1°)	0.353 (-40°)	0.137 (-39°)	0.395 (1°)	0.434 (-19°)	0.137 (-39°)	0.434 (-19°)
22	Sup.	2	0.379 (-1°)	0.346 (40°)	0.149 (38°)	0.379 (-1°)	0.430 (20°)	0.149 (38°)	0.430 (20°)
	Inf.	1	0.379 (1°)	0.346 (-40°)	0.149 (-38°)	0.379 (1°)	0.430 (-20°)	0.149 (-38°)	0.430 (-20°)
23	Sup.	2	0.359 (-1°)	0.337 (39°)	0.160 (37°)	0.359 (-1°)	0.424 (21°)	0.160 (37°)	0.424 (21°)
	Inf.	1	0.359 (1°)	0.337 (-39°)	0.160 (-37°)	0.359 (1°)	0.424 (-21°)	0.160 (-37°)	0.424 (-21°)
24	Sup.	2	0.337 (-1°)	0.326 (38°)	0.171 (37°)	0.337 (-1°)	0.415 (23°)	0.171 (37°)	0.415 (23°)
	Inf.	1	0.337 (1°)	0.326 (-38°)	0.171 (-37°)	0.337 (1°)	0.415 (-23°)	0.171 (-37°)	0.415 (-23°)
25	Sup.	2	0.311 (-1°)	0.312 (37°)	0.181 (36°)	0.311 (-1°)	0.404 (24°)	0.181 (36°)	0.404 (24°)
	Inf.	1	0.311 (1°)	0.312 (-37°)	0.181 (-36°)	0.311 (1°)	0.404 (-24°)	0.181 (-36°)	0.404 (-24°)
26	Sup.	2	0.282 (-2°)	0.297 (35°)	0.191 (36°)	0.282 (-2°)	0.391 (25°)	0.191 (36°)	0.391 (25°)
	Inf.	1	0.282 (2°)	0.297 (-35°)	0.191 (-36°)	0.282 (2°)	0.391 (-25°)	0.191 (-36°)	0.391 (-25°)
27	Sup.	2	0.249 (-2°)	0.279 (33°)	0.200 (35°)	0.249 (-2°)	0.374 (26°)	0.200 (35°)	0.374 (26°)
	Inf.	1	0.249 (2°)	0.279 (-33°)	0.200 (-35°)	0.249 (2°)	0.374 (-26°)	0.200 (-35°)	0.374 (-26°)
28	Sup.	2	0.214 (-3°)	0.261 (31°)	0.209 (34°)	0.214 (-3°)	0.355 (26°)	0.209 (34°)	0.355 (26°)
	Inf.	1	0.214 (3°)	0.261 (-31°)	0.209 (-34°)	0.214 (3°)	0.355 (-26°)	0.209 (-34°)	0.355 (-26°)
29	Sup.	2	0.175 (-3°)	0.242 (27°)	0.217 (34°)	0.175 (-3°)	0.334 (27°)	0.217 (34°)	0.334 (27°)
	Inf.	1	0.175 (3°)	0.242 (-27°)	0.217 (-34°)	0.175 (3°)	0.334 (-27°)	0.217 (-34°)	0.334 (-27°)
30	Sup.	2	0.133 (-5°)	0.225 (22°)	0.225 (33°)	0.133 (-5°)	0.310 (28°)	0.225 (33°)	0.310 (28°)
	Inf.	1	0.133 (5°)	0.225 (-22°)	0.225 (-33°)	0.133 (5°)	0.310 (-28°)	0.225 (-33°)	0.310 (-28°)
31	Sup.	2	0.089 (-8°)	0.213 (15°)	0.233 (33°)	0.089 (-8°)	0.284 (29°)	0.233 (33°)	0.284 (29°)
	Inf.	1	0.089 (8°)	0.213 (-15°)	0.233 (-33°)	0.089 (8°)	0.284 (-29°)	0.233 (-33°)	0.284 (-29°)
32	Sup.	2	0.043 (-16°)	0.211 (7°)	0.240 (32°)	0.043 (-16°)	0.267 (-31°)	0.240 (32°)	0.267 (-31°)
	Inf.	1	0.043 (16°)	0.211 (-7°)	0.240 (-32°)	0.043 (16°)	0.267 (31°)	0.240 (-32°)	0.267 (31°)

**Verifiche nelle sezioni di montante**

Mont.	$\Gamma_{vh}$	$\Gamma_b$
1	0.56	0.52
2	0.52	0.48
3	0.49	0.45
4	0.45	0.41
5	0.41	0.38
6	0.37	0.34
7	0.34	0.31

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<b>ACB+</b> v. 3.08	<b>Trave 1</b>			
<b>Verifiche dettagliate</b>				
<b>Sezione netta all'alveolo n° 32 - Resistenza a momento flettente</b>				
Combinazione U1				
Momento flettente	$M_{Ed}$	= 4.932 kNm		
Sforzo di taglio	$V_{Ed,l}$	= 32.10 kN	$V_{Ed,r}$	= 32.10 kN
Sforzi assiali	$N_{Ed,l}$	= 0.0 kN	$N_{Ed,r}$	= 0.0 kN
Sforzi assiali nei correnti	$N_{m,sup,l}$	= 22.53 kN	$N_{m,sup,r}$	= 22.53 kN
	$N_{m,int,l}$	= -22.53 kN	$N_{m,int,r}$	= -22.53 kN
Sforzo di taglio nei correnti	$V_{m,sup,l}$	= 18.05 kN	$V_{m,sup,r}$	= 18.05 kN
	$V_{m,int,l}$	= 18.05 kN	$V_{m,int,r}$	= 18.05 kN
Angolo	$\phi$	= -32.0		
Coefficiente parziale gamma	$\gamma_{M0}$	= 1.05		
Limite di snervamento	$f_{y,top}$	= 275 MPa	$f_{y,bot}$	= 275 MPa
<b>Corrente inferiore</b>				
Sezioni "T" inclinate	$h_{\phi}$	= 62.5 mm		
	$A_{\phi}$	= 2421 mm <sup>2</sup>	$A_{\phi}$	= 605.8 mm <sup>2</sup>
Forze proiettate	$N_{\phi}$	= -10.60 kN	$V_{\phi}$	= 18.60 kN
	$M_{\phi}$	= -1.113 kNm		
Classe del corrente		Classe 1		
Momento flettente resistente	$M_{c,Rd,\phi}$	= 4.162 kNm		
Criterio base	$\Gamma_M$	= 0.268		
<b>Sezione netta all'alveolo n° 16 - Resistenza allo sforzo assiale</b>				
Combinazione U1				
Momento flettente	$M_{Ed}$	= 54.64 kNm		
Sforzo di taglio	$V_{Ed,l}$	= -1.035 kN	$V_{Ed,r}$	= -1.035 kN
Sforzi assiali	$N_{Ed,l}$	= 0.0 kN	$N_{Ed,r}$	= 0.0 kN
Sforzi assiali nei correnti	$N_{m,sup,l}$	= 249.6 kN	$N_{m,sup,r}$	= 249.6 kN
	$N_{m,int,l}$	= -249.6 kN	$N_{m,int,r}$	= -249.6 kN
Sforzo di taglio nei correnti	$V_{m,sup,l}$	= -0.518 kN	$V_{m,sup,r}$	= -0.518 kN
	$V_{m,int,l}$	= -0.518 kN	$V_{m,int,r}$	= -0.518 kN
Angolo	$\phi$	= 0.0		
Coefficiente parziale gamma	$\gamma_{M0}$	= 1.05		
Limite di snervamento	$f_{y,top}$	= 275 MPa	$f_{y,bot}$	= 275 MPa
<b>Corrente superiore</b>				
Sezioni "T" inclinate	$h_{\phi}$	= 41.6 mm		
	$A_{\phi}$	= 1999 mm <sup>2</sup>	$A_{\phi}$	= 460.0 mm <sup>2</sup>
Forze proiettate	$N_{\phi}$	= 249.6 kN	$V_{\phi}$	= -0.518 kN
	$M_{\phi}$	= 0.0 kNm		
Classe del corrente		Classe 2		
Forza resistente assiale	$N_{c,Rd,\phi}$	= 523.6 kN		
Criterio base	$\Gamma_N$	= 0.477		
<b>Sezione netta all'alveolo n° 14 - Resistenza allo sforzo di taglio</b>				
Combinazione U1				
Momento flettente	$M_{Ed}$	= 53.39 kNm		
Sforzo di taglio	$V_{Ed,l}$	= -5.177 kN	$V_{Ed,r}$	= -5.177 kN
Sforzi assiali	$N_{Ed,l}$	= 0.0 kN	$N_{Ed,r}$	= 0.0 kN
Sforzi assiali nei correnti	$N_{m,sup,l}$	= 244.0 kN	$N_{m,sup,r}$	= 244.0 kN
	$N_{m,int,l}$	= -244.0 kN	$N_{m,int,r}$	= -244.0 kN



<b>ACB+</b> v. 3.08		<b>Trave 1</b>				
Sforzo di taglio nei correnti	$V_{m,sup,l}$	=	-2.589 kN	$V_{m,sup,r}$	=	-2.589 kN
	$V_{m,int,l}$	=	-2.589 kN	$V_{m,int,r}$	=	-2.589 kN
Angolo	$\phi$	=	40.0			
Coefficiente parziale gamma	$\gamma_{M0}$	=	1.05			
Limite di snervamento	$f_{y,top}$	=	275 MPa	$f_{y,bot}$	=	275 MPa
<b>Corrente inferiore</b>						
Sezioni "T" inclinate	$h_y$	=	77.2 mm			
	$A_y$	=	2717 mm <sup>2</sup>	$A_{y\phi}$	=	708.5 mm <sup>2</sup>
Forze proiettate	$N_y$	=	-185.2 kN	$V_y$	=	-42.86 kN
	$M_y$	=	-0.744 kNm			
Forza resistente a taglio	$V_{c,Rd,y}$	=	107.1 kN			
Criterio base	$\Gamma_V$	=	0.400			
<b>Sezione netta all'alveolo n° 20 - Interazione M-N-V</b>						
Combinazione U1						
Momento flettente	$M_{Ed}$	=	52.15 kNm			
Sforzo di taglio	$V_{Ed,l}$	=	7.248 kN	$V_{Ed,r}$	=	7.248 kN
Sforzi assiali	$N_{Ed,l}$	=	0.0 kN	$N_{Ed,r}$	=	0.0 kN
Sforzi assiali nei correnti	$N_{m,sup,l}$	=	238.3 kN	$N_{m,sup,r}$	=	238.3 kN
	$N_{m,int,l}$	=	-238.3 kN	$N_{m,int,r}$	=	-238.3 kN
Sforzo di taglio nei correnti	$V_{m,sup,l}$	=	3.624 kN	$V_{m,sup,r}$	=	3.624 kN
	$V_{m,int,l}$	=	3.624 kN	$V_{m,int,r}$	=	3.624 kN
Angolo	$\phi$	=	-17.0			
Coefficiente parziale gamma	$\gamma_{M0}$	=	1.05			
Limite di snervamento	$f_{y,top}$	=	275 MPa	$f_{y,bot}$	=	275 MPa
<b>Corrente inferiore</b>						
Sezioni "T" inclinate	$h_y$	=	46.9 mm			
	$A_y$	=	2107 mm <sup>2</sup>	$A_{y\phi}$	=	497.2 mm <sup>2</sup>
Forze proiettate	$N_y$	=	-228.8 kN	$V_y$	=	19.91 kN
	$M_y$	=	-0.200 kNm			
Forza resistente a taglio	$V_{c,Rd,y}$	=	75.18 kN	$\Gamma_V$	=	0.265
Riduzione	$\rho$	=	0.000	(Nessuna riduzione)		
Forza resistente assiale	$N_{V,Rd}$	=	551.7 kN	$\Gamma_{NV}$	=	0.411
Momento flettente resistente	$M_{V,Rd}$	=	2.699 kNm	$\Gamma_{MV}$	=	0.074
Interazione MNV	$\Gamma_{MNV}$	=	0.485			
<b>Instabilità a taglio</b>						
Sezione all'asse dell'alveolo (otturato) n° 1						
Dimensioni dell'anima	$h_w$	=	214.2 mm	$t_w$	=	6.0 mm
Limite di snervamento	$f_y$	=	275 MPa	$\epsilon$	=	0.924
	$\eta$	=	1.20			
$h_w / t_w = 35.69 < 72\epsilon; h/\eta = 55.46$ Verifica d'instabilità al taglio non richiesta						
<b>Resistenza a taglio del montante n° 1</b>						
Combinazione U1						
Distanza tra CdG delle "T"	$d_G$	=	218.9 mm			
Momenti flettenti	$M_{Ed,l}$	=	4.932 kNm	$M_{Ed,r}$	=	11.14 kNm
Sforzi assiali nelle "T"	$N_{m,sup,l}$	=	22.53 kN	$N_{m,int,l}$	=	-22.53 kN
	$N_{m,sup,r}$	=	50.92 kN	$N_{m,int,r}$	=	-50.92 kN
Sforzo di taglio orizzontale nel montante	$V_{hm}$	=	28.39 kN			
Larghezza montante	$w$	=	50.00 mm			
Forze resistenti a taglio	$V_{hRd,top}$	=	45.36 kN	$V_{hRd,bot}$	=	45.36 kN
Verifiche	$\Gamma_{Vh,top}$	=	0.626	$\Gamma_{Vh,bot}$	=	0.626



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<b>Resistenza all'instabilità del montante n° 31</b>			
Combinazione U1			
Diametro	$a_0$	= 150.0 mm	
Interassi alveoli	$e$	= 200.0 mm	$\alpha = e / a_0 = 1.33$
Altezza della sezione trasversale	$H_t$	= 233.2 mm	
Altezza dei correnti	$h_{m,top}$	= 116.6 mm	$h_{m,bot} = 116.6$ mm
Altezza delle "T"	$h_{Te,top}$	= 41.8 mm	$h_{Te,bot} = 41.8$ mm
Centroidi delle "T"	$d_{G,top}$	= 109.4 mm	$d_{G,bot} = 109.4$ mm
$d_G = d_{G,top} + d_{G,bot}$	$d_G$	= 218.9 mm	
Area delle "T"	$A_{0,top}$	= 1999.0 mm <sup>2</sup>	$A_{0,bot} = 1999.0$ mm <sup>2</sup>
Area a taglio delle "T"	$A_{v,top}$	= 460.0 mm <sup>2</sup>	$A_{v,bot} = 460.0$ mm <sup>2</sup>
Limite di snervamento	$f_{y,top}$	= 275 MPa	$f_{y,bot} = 275$ MPa
Forze di taglio	$V_{Ed,l}$	= -30.03 kN	$V_{Ed,r} = -32.10$ kN
Momenti	$M_{Ed,l}$	= 11.14 kNm	$M_{Ed,r} = 4.93$ kNm
Parametri a taglio	$\eta$	= 0.330	$k_{Av} = 0.500$
Forze assiali nei correnti	$N_{m,top}$	= 50.92 kN	$N_{m,bot} = -50.92$ kN
	$N_{m,root}$	= 22.53 kN	$N_{m,root} = -22.53$ kN
Forze di taglio nei correnti	$V_{m,top}$	= -15.01 kN	$V_{m,bot} = -15.01$ kN
	$V_{m,root}$	= -16.05 kN	$V_{m,root} = -16.05$ kN
Sollecitazioni nel montante	$V_{hm}$	= -28.39 kN	$M_{hm} = 0.00$ kNm
Sezione critica	$d_w$	= 33.2 mm	$L_w = 65.5$ mm
Momenti nelle sezioni critiche	$M_{GEd,top}$	= -0.94 kNm	$M_{GEd,bot} = -0.94$ kNm
Tensioni principali	$\sigma_{W,top}$	= 273 MPa	$\sigma_{W,bot} = 273$ MPa
Sollecitazioni critiche	$V_{hCr,top}$	= 355.76 kN	$V_{hCr,bot} = 355.76$ kN
	$N_{mCr,top}$	= 1244.39 kN	$N_{mCr,bot} = 1244.39$ kN
Coefficienti critici	$\beta_{Cr,top}$	= 12.134	$\beta_{Cr,bot} = 12.741$
	$\alpha_{Cr,top}$	= 12.430	$\alpha_{Cr,bot} = 12.741$
Tensioni critiche	$\sigma_{Cr,top}$	= 3395 MPa	$\sigma_{Cr,bot} = 3480$ MPa
Snellezze ridotte	$\lambda_{top}$	= 0.349	$\lambda_{bot} = 0.344$
Con	$\xi$	= 1.502	
Coefficienti di riduzione	$\chi_{top}$	= 0.966	$\chi_{bot} = 0.967$
Tensioni resistenti	$\sigma_{WRd,top}$	= 380 MPa	$\sigma_{WRd,bot} = 380$ MPa
Momenti plastici delle "T"	$M_{plRd,Te,top}$	= 2.29 kNm	$M_{plRd,Te,bot} = 2.29$ kNm
Coefficiente parziale Psi	$\psi_{top}$	= 0.712	$\psi_{bot} = 0.712$
Fattore di resistenza Post-Buckling	$k_{top}$	= 1.250	$k_{bot} = 1.250$
Verifiche	$\Gamma_{b,top}$	= 0.575	$\Gamma_{b,bot} = 0.575$
<b>Resistenza a flessione delle sezioni lorde (piene)</b>			
Sezione all'asse del montante n° 16 (Sezione n° 34) - Combinazione U1			
Sollecitazioni interne	$M_{Ed}$	= 54.69 kNm	$N_{Ed} = 0.00$ kN
Flangia superiore in compressione: Classe 1			
Classe dell'anima			
Acciaio	$f_{y,w}$	= 275 MPa	$\epsilon_w = 0.924$
Snellezza:	$c / t$	= 30.69	
Coeff. diagramma plastico	$\alpha$	= 0.50	
Classe dell'anima 1			
Verifica di resistenza (Classe 1)			
Acciaio	$f_{y,top}$	= 275 MPa	$f_{y,bot} = 275$ MPa
Coefficiente parziale gamma	$\gamma_{M0}$	= 1.05	

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Momento resistente plastico	$M_{pl,Rd}$	=	123.43 kNm		
Verifica	$\Gamma_{MW}$	=	0.443		
<b>Resistenza a taglio delle sezioni lorde (piene)</b>					
Sezione all'appoggio s <sub>x</sub> (Sezione n° 1) - Combinazione U1					
Altezza della sezione trasversale	h	=	233.2 mm		
Area a taglio	$A_{v,top}$	=	910.0 mm <sup>2</sup>	$A_{v,bot}$	= 910.0 mm <sup>2</sup>
Limite di snervamento	$f_{y,top}$	=	275 MPa	$f_{y,bot}$	= 275 MPa
Forza di taglio di progetto	$V_{Ed}$	=	33.85 kN		
Forza di taglio resistente	$V_{pl,Rd}$	=	275.21 kN	$\gamma_{M0}$	= 1.05
Verifica	$\Gamma_{Vg}$	=	0.122		
<b>Resistenza all'instabilità flessione-torsionale (LTB)</b>					
Combinazione U1					
Verifica flangia superiore					
Zona situata tra le sezioni vincolate lateralmente in x = 3.250 m e x = 6.500 m					
Lunghezza della zona	L	=	3.250 m		
Momenti alle estremità	$M_{end,l}$	=	54.69 kNm	$M_{end,r}$	= 0.00 kNm
Momento massimo	$M_{Ed}$	=	54.69 kNm		
Sforzo assiale massimo nel corrente	$N_{Ed}$	=	249.83 kN		
Proprietà della sezione del corrente	$A_0$	=	1999.0 mm <sup>2</sup>	$I_{z,0}$	= 462.1 cm <sup>4</sup>
Limite di snervamento	$f_y$	=	275 MPa		
Altezza del "T"	$h_{Te}$	=	41.6 mm		
Parametri di ripartizione del momento	$\beta$	=	0.000	$\mu$	= 0.250
Coefficiente C1	$C_1$	=	1.350		
Sforzo assiale critico	$N_{cr}$	=	1224.28 kN		
Snellezza ridotta	$\lambda_b$	=	0.670		
Coefficiente di riduzione (curva "c")	$\chi$	=	0.743		
Coefficiente parziale	$\gamma_{M1}$	=	1.050		
Sforzo normale resistente	$N_{b,Rd}$	=	389.06 kN		
Verifica	$\Gamma_{LT}$	=	0.642		
<b>Spessore minimo gola saldata al montante n° 31</b>					
Combinazione U1					
Larghezza del montante	w	=	50.00 mm		
Limite di rottura	$f_u$	=	430.0 MPa	$\beta_w$	= 0.85
Momenti all'asse degli alveoli	$M_{Ed,l}$	=	11.14 kNm	$M_{Ed,r}$	= 4.932 kNm
Distanze dei CdG dei correnti	$d_{G,l}$	=	218.9 mm	$d_{G,r}$	= 218.9 mm
Sforzi assiali nei correnti	$N_{m,Ed,l}$	=	50.92 kN	$N_{m,Ed,r}$	= 22.53 kN
Sforzo di taglio orizzontale nel montante	$V_{h,Ed}$	=	28.39 kN		
Momento nel montante	$M_{h,Ed}$	=	0.0 kNm		
Coefficienti parziali gamma	$\gamma_{M2}$	=	1.25		
Spessore della gola della saldatura	a	=	1.215 mm		
Attenzione: l'altezza di gola è calcolata assumendo 2 cordoni di saldatura					
Lo spessore totale della saldatura deve essere minimo di 2.43 mm					
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<b>STATO LIMITE DI SERVIZIO (SLE)</b>		
<b>Spostamenti</b>		
v : Freccia verticale massima della trave		
<b>Sotto combinazioni di carico elementari</b>		
Carichi permanenti portati (G) :	v = 3.95 mm (S34)	= L / 1648
Carichi accidentali 1 (Q1) :	v = 12.32 mm (S34)	= L / 528
Carichi accidentali 2 (Q2) :	v = 3.70 mm (S34)	= L / 1759
<b>Sotto combinazioni SLE</b>		
S1 = 1.00 G + 1.00 Q1 :	v = 16.3 mm (S34)	= L / 400
S2 = 1.00 G + 1.00 Q1 + 0.50 Q2 :	v = 18.1 mm (S34)	= L / 359
S3 = 1.00 G + 1.00 Q2 :	v = 7.84 mm (S34)	= L / 851
S4 = 1.00 G + 0.70 Q1 + 1.00 Q2 :	v = 16.3 mm (S34)	= L / 400
L'utente deve controllare se le deformate sono conformi ai dettami di progetto e prendere in considerazione una controfreccia all'occorrenza.		
<b>Frequenze proprie</b>		
Carico / Combinazione	Massa assunta come concentrata	Massa assunta come distribuita
G	7.95Hz	8.08Hz
G + 0.1 Q1	6.94Hz	7.91Hz
G + 0.2 Q1	6.24Hz	7.11Hz
G + 0.3 Q1	5.72Hz	6.51Hz
G + 0.4 Q1	5.30Hz	6.04Hz
G + 0.5 Q1	4.97Hz	5.68Hz
G + 0.1 Q2	7.61Hz	8.67Hz
G + 0.2 Q2	7.30Hz	8.32Hz
G + 0.3 Q2	7.03Hz	8.01Hz
G + 0.4 Q2	6.78Hz	7.73Hz
G + 0.5 Q2	6.56Hz	7.48Hz
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