

AMMINISTRAZIONE PROVINCIALE
 di POTENZA

**REALIZZAZIONE INTERVENTI RELATIVI ALLA
 "SUPERSTRADA NOCE RIVELLO - COLLA MARATEA"
 LAVORI DI COMPLETAMENTO.**

P R O G E T T O E S E C U T I V O

ELABORATI TECNICO - CONTABILI :

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2. Relazione Descrittiva e Tecnica	9. Cronoprogramma	16. Piano di Manutenzione
3. Relazione Specialistica Barriere	10. Piano di Sicurezza	16.1. Manuale d' Uso
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7. Capitolato Speciale d'Appalto	14. Stima Costi Sicurezza	16.5. Sottoprogramma degli Interventi

D DISEGNI :

D1. Inquadram. Territor. - Stralcio P.T.P.	D4. Planimetria Catastale	D7. Planimetria di Dettaglio - Km 14+500
D2. Inquadram. Territor. - Rischio Idrog.	D5. Planimetria Stato di Fatto	D8. Planimetria di Dettaglio - Km 30+700
D3. Inquadram. Territor. - Corografia	D6. Planimetria di Progetto	D9. Particolari

S STRUTTURE :

S1. Calcolo delle Strutture	S3. Relazione sui Materiali	S5. Grafici Strutturali - Km 30+700
S2. Relazione Geotecnica	S4. Grafici Strutturali - Km 14+500	

Allegato/Tavola n°: <div style="font-size: 48px; font-weight: bold; text-align: center;">S1.1</div>	Titolo: <div style="text-align: center;"> Calcolo delle Strutture (Muro su Pali al Km. 14+500) </div>
Lagonegro, Ottobre 2019 Revisione: <u>2</u> Commessa: <u>119</u> Allegato/Tavola: <u>E S01.1</u>	<div style="text-align: right;"> Il Progettista: Archiving Studio s.r.l. ing. Andrea BIANCO </div> <div style="text-align: center;">  </div> <div style="text-align: center;"> certificazione qualità ISO 9001/2015 N° 12609/05/S certificazione EGE UNICEI 11339/2009 N° 008 </div> <div style="text-align: right;">   </div>

Progetto: Muro Su Pali
Ditta:
Comune: PROVINCIA DI POTENZA
Progettista: Ing. Andrea BIANCO
Direttore dei Lavori:
Impresa:

Normative di riferimento

- Legge nr. 1086 del 05/11/1971.
Norme per la disciplina delle opere in conglomerato cementizio, normale e precompresso ed a struttura metallica.
- Legge nr. 64 del 02/02/1974.
Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche.
- D.M. LL.PP. del 11/03/1988.
Norme tecniche riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione e il collaudo delle opere di sostegno delle terre e delle opere di fondazione.
- D.M. LL.PP. del 14/02/1992.
Norme tecniche per l'esecuzione delle opere in cemento armato normale e precompresso e per le strutture metalliche.
- D.M. 9 Gennaio 1996
Norme Tecniche per il calcolo, l'esecuzione ed il collaudo delle strutture in cemento armato normale e precompresso e per le strutture metalliche
- D.M. 16 Gennaio 1996
Norme Tecniche relative ai 'Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi'
- D.M. 16 Gennaio 1996
Norme Tecniche per le costruzioni in zone sismiche
- Circolare Ministero LL.PP. 15 Ottobre 1996 N. 252 AA.GG./S.T.C.
Istruzioni per l'applicazione delle Norme Tecniche di cui al D.M. 9 Gennaio 1996
- Circolare Ministero LL.PP. 10 Aprile 1997 N. 65/AA.GG.
Istruzioni per l'applicazione delle Norme Tecniche per le costruzioni in zone sismiche di cui al D.M. 16 Gennaio 1996
- Norme Tecniche per le Costruzioni 2018 (D.M. 17 Gennaio 2018)

Il calcolo dei muri di sostegno viene eseguito secondo le seguenti fasi:

- Calcolo della spinta del terreno
- Verifica a ribaltamento
- Verifica a scorrimento del muro sul piano di posa
- Verifica della stabilità complesso fondazione terreno (carico limite)
- Verifica della stabilità globale

Calcolo delle sollecitazioni sia del muro che della fondazione, progetto delle armature e relative verifiche dei materiali

Calcolo della spinta sul muro

Valori caratteristici e valori di calcolo

Effettuando il calcolo tramite gli Eurocodici è necessario fare la distinzione fra i parametri caratteristici ed i valori di calcolo (o di progetto) sia delle azioni che delle resistenze.

I valori di calcolo si ottengono dai valori caratteristici mediante l'applicazione di opportuni coefficienti di sicurezza parziali γ . In particolare si distinguono combinazioni di carico di tipo **A1-M1** nelle quali vengono incrementati i carichi e lasciati inalterati i parametri di resistenza del terreno e combinazioni di carico di tipo **A2-M2** nelle quali vengono ridotti i parametri di resistenza del terreno e incrementati i soli carichi variabili.

Metodo di Culmann

Il metodo di Culmann adotta le stesse ipotesi di base del metodo di Coulomb. La differenza sostanziale è che mentre Coulomb considera un terrapieno con superficie a pendenza costante e carico uniformemente distribuito (il che permette di ottenere una espressione in forma chiusa per il coefficiente di spinta) il metodo di Culmann consente di analizzare situazioni con profilo di forma generica e carichi sia concentrati che distribuiti comunque disposti. Inoltre, rispetto al metodo di Coulomb, risulta più immediato e lineare tener conto della coesione del masso spingente. Il metodo di Culmann, nato come metodo essenzialmente grafico, si è evoluto per essere trattato mediante analisi numerica (noto in questa forma come metodo del cuneo di tentativo). Come il metodo di Coulomb anche questo metodo considera una superficie di rottura rettilinea.

I passi del procedimento risolutivo sono i seguenti:

- si impone una superficie di rottura (angolo di inclinazione ρ rispetto all'orizzontale) e si considera il cuneo di spinta delimitato dalla superficie di rottura stessa, dalla parete su cui si calcola la spinta e dal profilo del terreno;
- si valutano tutte le forze agenti sul cuneo di spinta e cioè peso proprio (W), carichi sul terrapieno, resistenza per attrito e per coesione lungo la superficie di rottura (R e C) e resistenza per coesione lungo la parete (A);
- dalle equazioni di equilibrio si ricava il valore della spinta S sulla parete.

Questo processo viene iterato fino a trovare l'angolo di rottura per cui la spinta risulta massima.

La convergenza non si raggiunge se il terrapieno risulta inclinato di un angolo maggiore dell'angolo d'attrito del terreno.

Nei casi in cui è applicabile il metodo di Coulomb (profilo a monte rettilineo e carico uniformemente distribuito) i risultati ottenuti col metodo di Culmann coincidono con quelli del metodo di Coulomb.

Le pressioni sulla parete di spinta si ricavano derivando l'espressione della spinta S rispetto all'ordinata z . Noto il diagramma delle pressioni è possibile ricavare il punto di applicazione della spinta.

Spinta in presenza di sisma

Per tener conto dell'incremento di spinta dovuta al sisma si fa riferimento al metodo di Mononobe-Okabe (cui fa riferimento la Normativa Italiana).

La Normativa Italiana suggerisce di tener conto di un incremento di spinta dovuto al sisma nel modo seguente.

Detta ε l'inclinazione del terrapieno rispetto all'orizzontale e β l'inclinazione della parete rispetto alla verticale, si calcola la spinta S' considerando un'inclinazione del terrapieno e della parte pari a

$$\varepsilon' = \varepsilon + \theta$$

$$\beta' = \beta + \theta$$

dove $\theta = \arctg(k_h/(1 \pm k_v))$ essendo k_h il coefficiente sismico orizzontale e k_v il coefficiente sismico verticale, definito in funzione di k_h .

In presenza di falda a monte, θ assume le seguenti espressioni:

Terreno a bassa permeabilità

$$\theta = \arctg[(\gamma_{sat}/(\gamma_{sat}-\gamma_w)) * (k_h/(1 \pm k_v))]$$

Terreno a permeabilità elevata

$$\theta = \arctg[(\gamma/(\gamma_{sat}-\gamma_w)) * (k_h/(1 \pm k_v))]$$

Detta S la spinta calcolata in condizioni statiche l'incremento di spinta da applicare è espresso da

$$\Delta S = AS' - S$$

dove il coefficiente A vale

$$A = \frac{\cos^2(\beta + \theta)}{\cos^2\beta \cos\theta}$$

In presenza di falda a monte, nel coefficiente A si tiene conto dell'influenza dei pesi di volume nel calcolo di θ .

Adottando il metodo di Mononobe-Okabe per il calcolo della spinta, il coefficiente A viene posto pari a 1.

Tale incremento di spinta è applicato a metà altezza della parete di spinta nel caso di forma rettangolare del diagramma di incremento sismico, allo stesso punto di applicazione della spinta statica nel caso in cui la forma del diagramma di incremento sismico è uguale a quella del diagramma statico.

Oltre a questo incremento bisogna tener conto delle forze d'inerzia orizzontali e verticali che si destano per effetto del sisma. Tali forze vengono valutate come

$$F_{iH} = k_h W \quad F_{iV} = \pm k_v W$$

dove W è il peso del muro, del terreno soprastante la mensola di monte ed i relativi sovraccarichi e va applicata nel baricentro dei pesi.

Il metodo di Culmann tiene conto automaticamente dell'incremento di spinta. Basta inserire nell'equazione risolutiva la forza d'inerzia del cuneo di spinta. La superficie di rottura nel caso di sisma risulta meno inclinata della corrispondente superficie in assenza di sisma.

Verifica alla stabilità globale

La verifica alla stabilità globale del complesso muro+terreno deve fornire un coefficiente di sicurezza non inferiore a η_g

Eseguendo il calcolo mediante gli Eurocodici si può impostare $\eta_g \geq 1.0$

Viene usata la tecnica della suddivisione a strisce della superficie di scorrimento da analizzare. La superficie di scorrimento viene supposta circolare e determinata in modo tale da non avere intersezione con il profilo del muro o con i pali di fondazione. Si determina il minimo coefficiente di sicurezza su una maglia di centri di dimensioni 10x10 posta in prossimità della sommità del muro. Il numero di strisce è pari a 50.

Il coefficiente di sicurezza fornito da Fellenius si esprime secondo la seguente formula:

$$\eta = \frac{\sum_i^n \left(\frac{c_i b_i}{\cos \alpha_i} + [W_i \cos \alpha_i - u_i l_i] \tan \phi_i \right)}{\sum_i^n W_i \sin \alpha_i}$$

dove n è il numero delle strisce considerate, b_i e α_i sono la larghezza e l'inclinazione della base della striscia i -esima rispetto all'orizzontale, W_i è il peso della striscia i -esima e c_i e ϕ_i sono le caratteristiche del terreno (coesione ed angolo di attrito) lungo la base della striscia.

Inoltre u_i ed l_i rappresentano la pressione neutra lungo la base della striscia e la lunghezza della base della striscia ($l_i = b_i / \cos \alpha_i$).

Quindi, assunto un cerchio di tentativo lo si suddivide in n strisce e dalla formula precedente si ricava η . Questo procedimento viene eseguito per il numero di centri prefissato e viene assunto come coefficiente di sicurezza della scarpata il minimo dei coefficienti così determinati.

Analisi dei pali

Per l'analisi della capacità portante dei pali occorre determinare alcune caratteristiche del terreno in cui si va ad operare. In particolare bisogna conoscere l'angolo d'attrito ϕ e la coesione c . Per pali soggetti a carichi trasversali è necessario conoscere il modulo di reazione laterale o il modulo elastico laterale.

La capacità portante di un palo solitamente viene valutata come somma di due contributi: portata di base (o di punta) e portata per attrito laterale lungo il fusto. Cioè si assume valida l'espressione:

$$Q_T = Q_P + Q_L - W_P$$

dove:

Q_T portanza totale del palo
 Q_P portanza di base del palo
 Q_L portanza per attrito laterale del palo
 W_P peso proprio del palo

e le due componenti Q_P e Q_L sono calcolate in modo indipendente fra loro.

Dalla capacità portante del palo si ricava il carico ammissibile del palo Q_A applicando il coefficiente di sicurezza della portanza alla punta η_p ed il coefficiente di sicurezza della portanza per attrito laterale η_l .

Palo compresso:

$$Q_A = Q_P / \eta_p + Q_L / \eta_l - W_P$$

Palo teso:

$$Q_A = Q_L / \eta_l + W_P$$

Capacità portante di punta

In generale la capacità portante di punta viene calcolata tramite l'espressione:

$$Q_p = A_p(cN'_c + qN'_q + 1/2B\gamma N'_\gamma)$$

dove A_p è l'area portante efficace della punta del palo, c è la coesione, q è la pressione geostatica alla quota della punta del palo, γ è il peso specifico del terreno, D è il diametro del palo ed i coefficienti N'_c , N'_q , N'_γ sono i coefficienti delle formule della capacità portante corretti per tener conto degli effetti di forma e di profondità. Possono essere utilizzati sia i coefficienti di Hansen che quelli di Vesic con i corrispondenti fattori correttivi per la profondità e la forma.

Il parametro η che compare nell'espressione assume il valore:

$$\eta = \frac{1 + 2K_0}{3}$$

quando si usa la formula di Vesic e viene posto uguale ad 1 per le altre formule.

K_0 rappresenta il coefficiente di spinta a riposo che può essere espresso come: $K_0 = 1 - \sin\phi$.

Capacità portante per resistenza laterale

La resistenza laterale è data dall'integrale esteso a tutta la superficie laterale del palo delle tensioni tangenziali palo-terreno in condizioni limite:

$$Q_L = \int \tau_a dS$$

dove τ_a è dato dalla nota relazione di Coulomb

$$\tau_a = c_a + \sigma_h \tan\delta$$

dove c_a è l'adesione palo-terreno, δ è l'angolo di attrito palo-terreno, γ è il peso specifico del terreno, z è la generica quota a partire dalla testa del palo, L e P sono rispettivamente la lunghezza ed il perimetro del palo, K_s è il coefficiente di spinta che dipende dalle caratteristiche meccaniche e fisiche del terreno dal suo stato di addensamento e dalle modalità di realizzazione del palo.

Portanza trasversale dei pali - Analisi ad elementi finiti

Nel modello di terreno alla Winkler il terreno viene schematizzato come una serie di molle elastiche indipendenti fra di loro. Le molle che schematizzano il terreno vengono caratterizzate tramite una costante elastica K espressa in Kg/cm²/cm che rappresenta la pressione (in Kg/cm²) che bisogna applicare per ottenere l'abbassamento di 1 cm.

Nel metodo degli elementi finiti occorre discretizzare il particolare problema. Nel caso specifico il palo viene suddiviso in un certo numero di elementi di eguale lunghezza. Ogni elemento è caratterizzato da una sezione avente area ed inerzia coincidente con quella del palo.

Il terreno viene schematizzato come una serie di molle orizzontali che reagiscono agli spostamenti nei due versi. La rigidezza assiale della singola molla è proporzionale alla costante di Winkler orizzontale del terreno, al diametro del palo ed alla lunghezza dell'elemento. La molla, però, non viene vista come un elemento infinitamente elastico ma come un elemento con comportamento del tipo elastoplastico perfetto (diagramma sforzi-deformazioni di tipo bilatero). Essa presenta una resistenza crescente al crescere degli spostamenti fino a che l'entità degli spostamenti si mantiene al di sotto di un certo spostamento limite, X_{max} oppure fino a quando non si raggiunge il valore della pressione limite. Superato tale limite non si ha un incremento di resistenza. E' evidente che assumendo un comportamento di questo tipo ci si addentra in un tipico problema non lineare che può essere risolto solo mediante una analisi al passo.

Questa modellazione presenta il notevole vantaggio di poter schematizzare tutti quei comportamenti individuati da Broms e che sarebbe impossibile trattare in un modello numerico. In particolare risulta automatico analizzare casi in cui si ha insufficiente portanza non per rottura del palo ma per rottura del terreno (vedi il caso di un palo molto rigido in un terreno molle).

Determinazione degli scarichi sul palo.

Gli scarichi sui pali vengono determinati mediante il metodo delle rigidezze.

La piastra di fondazione viene considerata infinitamente rigida (3 gradi di libertà) ed i pali vengono considerati incastrati o incernierati (la scelta del vincolo viene fatta dall'Utente nella tabella CARATTERISTICHE del sottomenu PALI) a tale piastra.

Viene effettuata una prima analisi di ogni palo di ciascuna fila (i pali di ogni fila hanno le stesse caratteristiche) per costruire una curva carichi-spostamenti del palo. Questa curva viene costruita considerando il palo elastico. Si tratta, in definitiva, della matrice di rigidezza del palo K_e , costruita imponendo traslazioni e rotazioni unitarie per determinare le corrispondenti sollecitazioni in testa al palo.

Nota la matrice di rigidezza di ogni palo si assembla la matrice globale (di dimensioni 3x3) della palificata, K .

A questo punto, note le forze agenti in fondazione (N, T, M) si possono ricavare gli spostamenti della piastra (abbassamento, traslazione e rotazione) e le forze che si scaricano su ciascun palo. Infatti indicando con p il vettore dei carichi e con u il vettore degli spostamenti della piastra abbiamo:

$$u = K^{-1}p$$

Noti gli spostamenti della piastra, e quindi della testa dei pali, abbiamo gli scarichi su ciascun palo. Allora per ciascun palo viene effettuata un'analisi elastoplastica incrementale (tramite il metodo degli elementi finiti) che, tenendo conto della plasticizzazione del terreno, calcola le sollecitazioni in tutte le sezioni del palo., le caratteristiche del terreno (rappresentate da K_h) sono tali che se non è possibile raggiungere l'equilibrio si ha collasso per rottura del terreno.

Normativa

N.T.C. 2018

Simbologia adottata

γ_{Gsfav}	Coefficiente parziale sfavorevole sulle azioni permanenti
γ_{Gfav}	Coefficiente parziale favorevole sulle azioni permanenti
γ_{Qsfav}	Coefficiente parziale sfavorevole sulle azioni variabili
γ_{Qfav}	Coefficiente parziale favorevole sulle azioni variabili
$\gamma_{tan\phi'}$	Coefficiente parziale di riduzione dell'angolo di attrito drenato
$\gamma_{c'}$	Coefficiente parziale di riduzione della coesione drenata
γ_{cu}	Coefficiente parziale di riduzione della coesione non drenata
γ_{qu}	Coefficiente parziale di riduzione del carico ultimo
γ_{γ}	Coefficiente parziale di riduzione della resistenza a compressione uniassiale delle rocce

Coefficienti di partecipazione combinazioni statiche

Coefficienti parziali per le azioni o per l'effetto delle azioni:

Carichi	Effetto		A1	A2	EQU	HYD
Permanenti	Favorevole	γ_{Gfav}	1.00	1.00	1.00	0.90
Permanenti	Sfavorevole	γ_{Gsfav}	1.30	1.00	1.30	1.10
Variabili	Favorevole	γ_{Qfav}	0.00	0.00	0.00	0.00
Variabili	Sfavorevole	γ_{Qsfav}	1.50	1.30	1.50	1.50

Coefficienti parziali per i parametri geotecnici del terreno:

Parametri		M1	M2	M2	M1
Tangente dell'angolo di attrito	$\gamma_{tan\phi'}$	1.00	1.25	1.25	1.00
Coesione efficace	$\gamma_{c'}$	1.00	1.25	1.25	1.00
Resistenza non drenata	γ_{cu}	1.00	1.40	1.40	1.00
Resistenza a compressione uniassiale	γ_{qu}	1.00	1.60	1.60	1.00
Peso dell'unità di volume	γ_{γ}	1.00	1.00	1.00	1.00

Coefficienti di partecipazione combinazioni sismiche

Coefficienti parziali per le azioni o per l'effetto delle azioni:

Carichi	Effetto		A1	A2	EQU	HYD
Permanenti	Favorevole	γ_{Gfav}	1.00	1.00	1.00	0.90
Permanenti	Sfavorevole	γ_{Gsfav}	1.00	1.00	1.00	1.10
Variabili	Favorevole	γ_{Qfav}	0.00	0.00	0.00	0.00
Variabili	Sfavorevole	γ_{Qsfav}	1.00	1.00	1.00	1.50

Coefficienti parziali per i parametri geotecnici del terreno:

Parametri		M1	M2	M2	M1
Tangente dell'angolo di attrito	$\gamma_{tan\phi'}$	1.00	1.00	1.00	1.00
Coesione efficace	$\gamma_{c'}$	1.00	1.00	1.00	1.00
Resistenza non drenata	γ_{cu}	1.00	1.00	1.00	1.00
Resistenza a compressione uniassiale	γ_{qu}	1.00	1.00	1.00	1.00
Peso dell'unità di volume	γ_{γ}	1.00	1.00	1.00	1.00

FONDAZIONE SUPERFICIALE

Coefficienti parziali γ_R per le verifiche agli stati limite ultimi STR e GEO

Verifica

	R1	R2	R3
Capacità portante della fondazione	1.00	1.00	1.40
Scorrimento	1.00	1.00	1.10
Resistenza del terreno a valle	1.00	1.00	1.40
Stabilità globale		1.10	

PALI DI FONDAZIONE

CARICHI VERTICALI. Coefficienti parziali γ_R per le verifiche dei pali

Pali trivellati

		R1	R2	R3
Punta	γ_b	1.00	1.70	1.35
Laterale compressione	γ_s	1.00	1.45	1.15
Totale compressione	γ_t	1.00	1.60	1.30
Laterale trazione	γ_{st}	1.00	1.60	1.25

CARICHI TRASVERSALI. Coefficienti parziali γ_T per le verifiche dei pali.

	R1	R2	R3
γ_T	1.00	1.60	1.30

Coefficienti di riduzione ξ per la determinazione della resistenza caratteristica dei pali

Numero di verticali indagate	1	$\xi_3=1.70$	$\xi_4=1.70$
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Geometria muro e fondazione

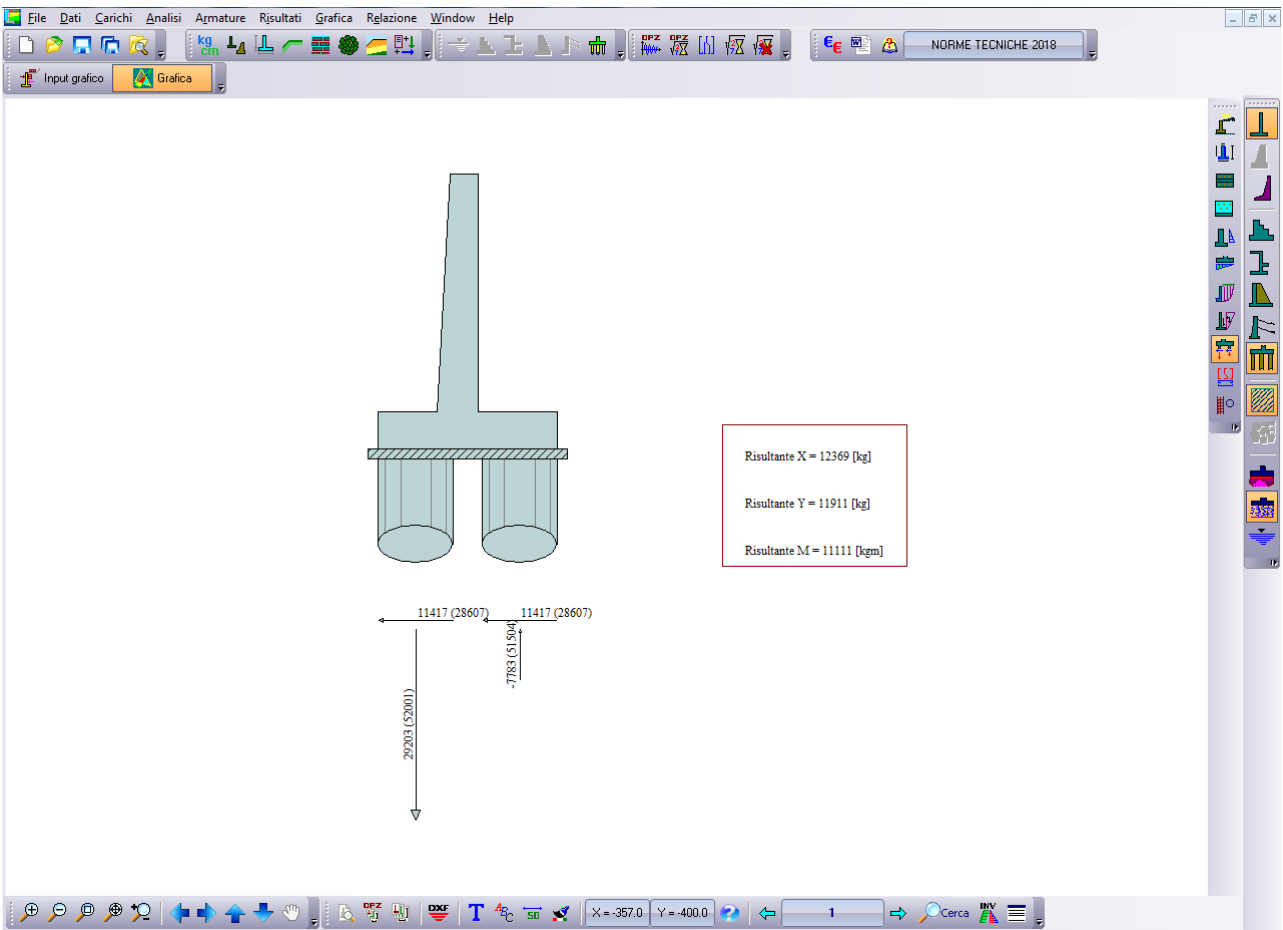
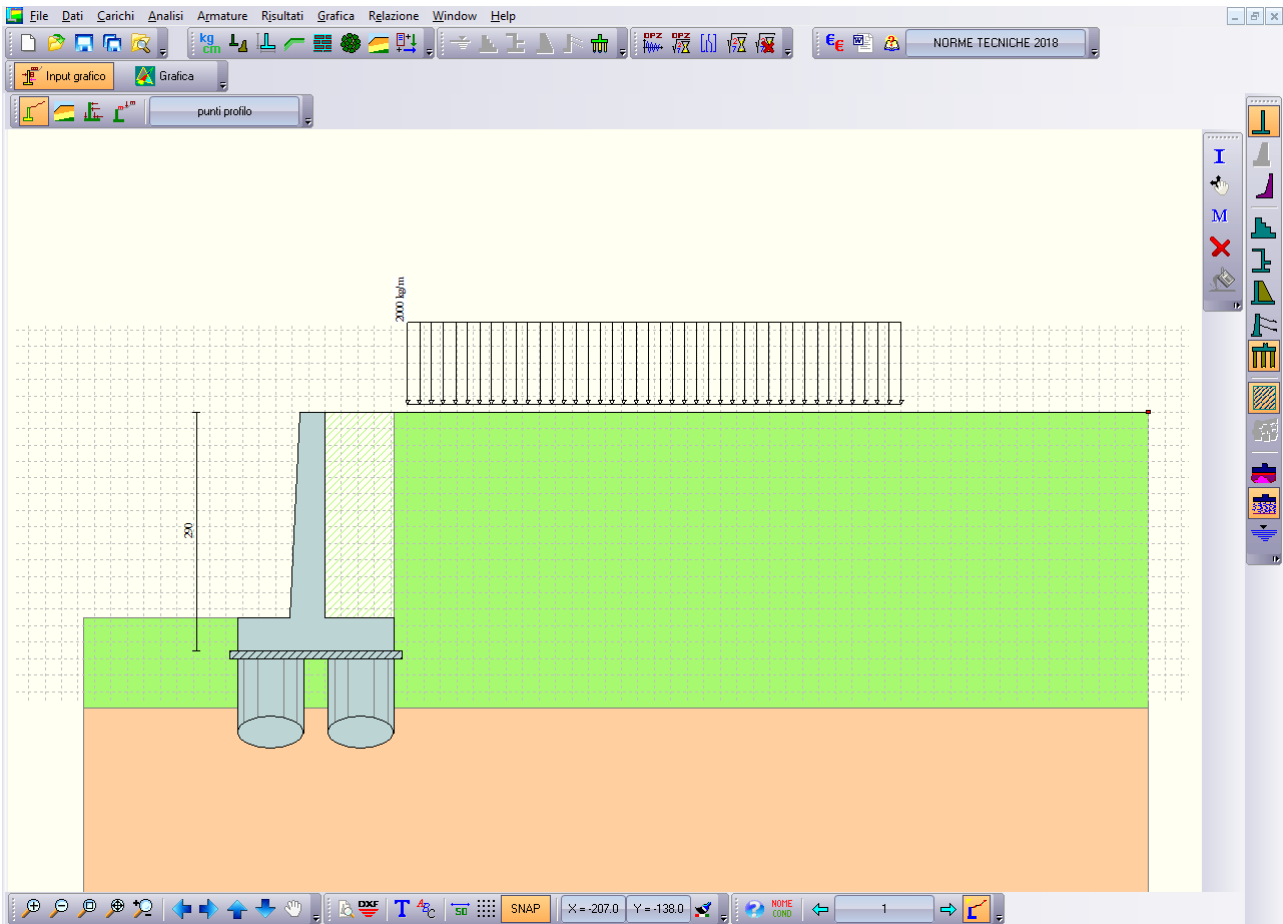
Descrizione	Muro a mensola in c.a.
Altezza del paramento	2.50 [m]
Spessore in sommità	0.30 [m]
Spessore all'attacco con la fondazione	0.43 [m]
Inclinazione paramento esterno	3.00 [°]
Inclinazione paramento interno	0.00 [°]
Lunghezza del muro	60.00 [m]
<u>Fondazione</u>	
Lunghezza mensola fondazione di valle	0.63 [m]
Lunghezza mensola fondazione di monte	0.84 [m]
Lunghezza totale fondazione	1.90 [m]
Inclinazione piano di posa della fondazione	0.00 [°]
Spessore fondazione	0.40 [m]
Spessore magrone	0.10 [m]

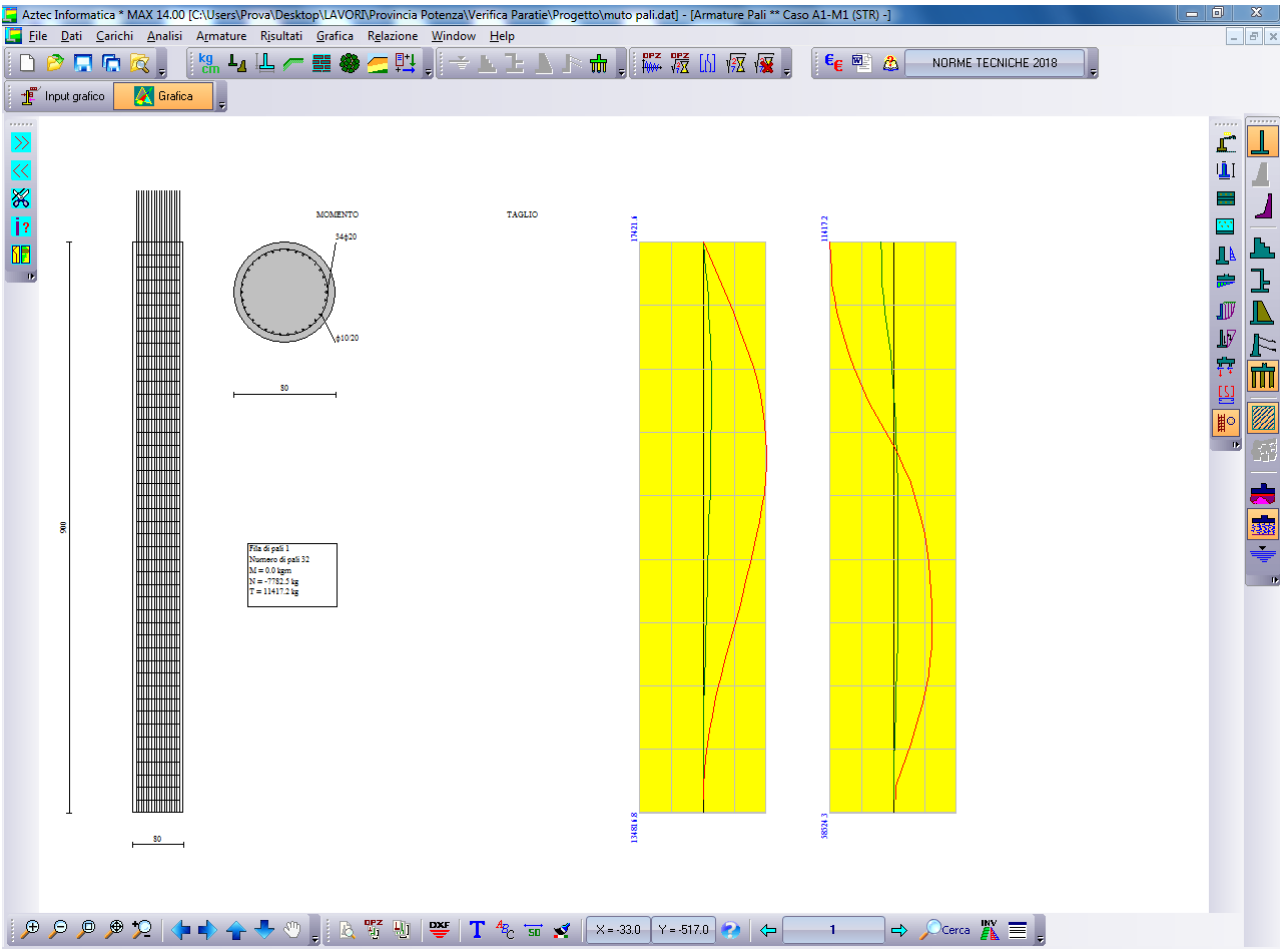
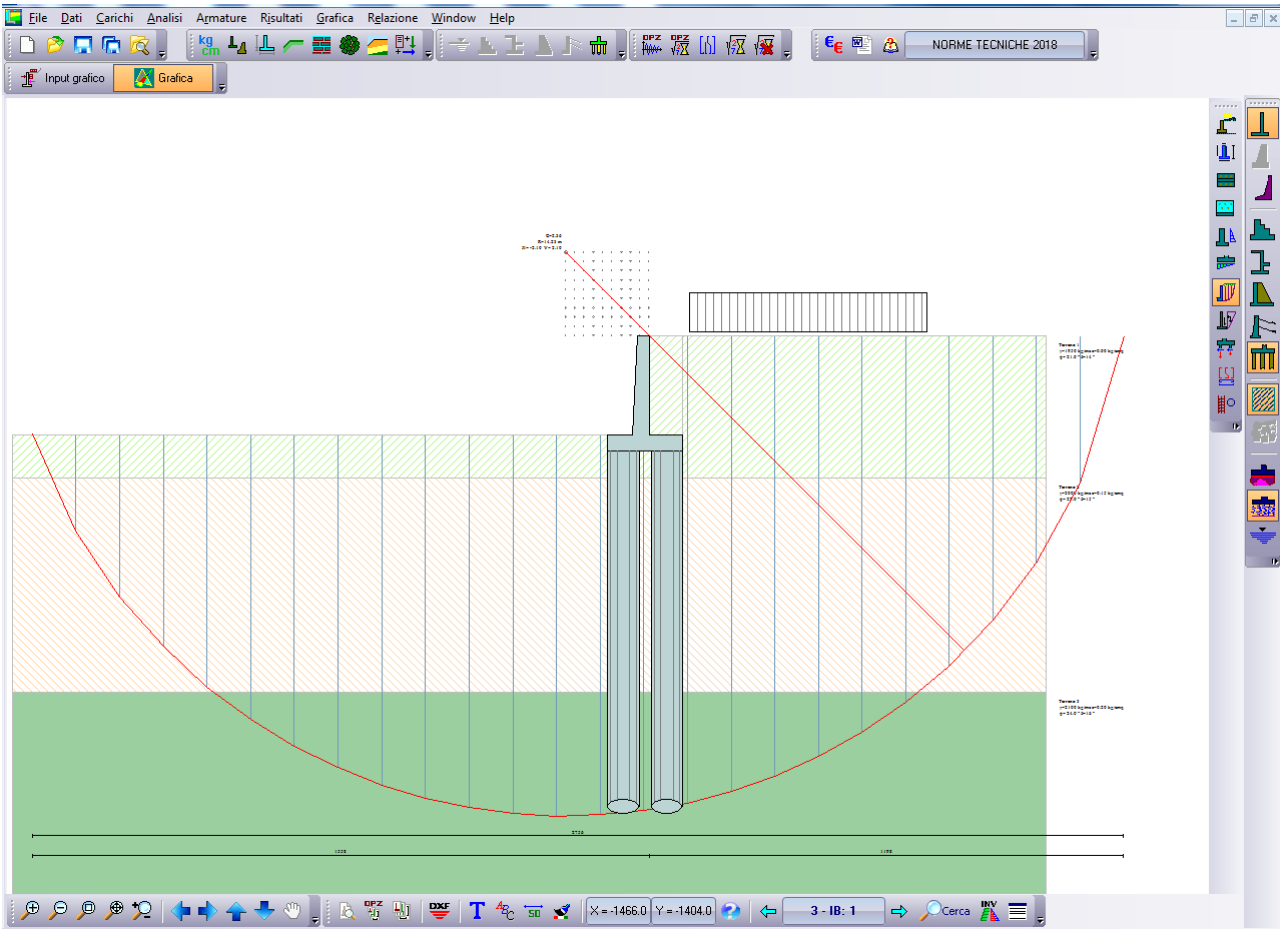
Descrizione pali di fondazione

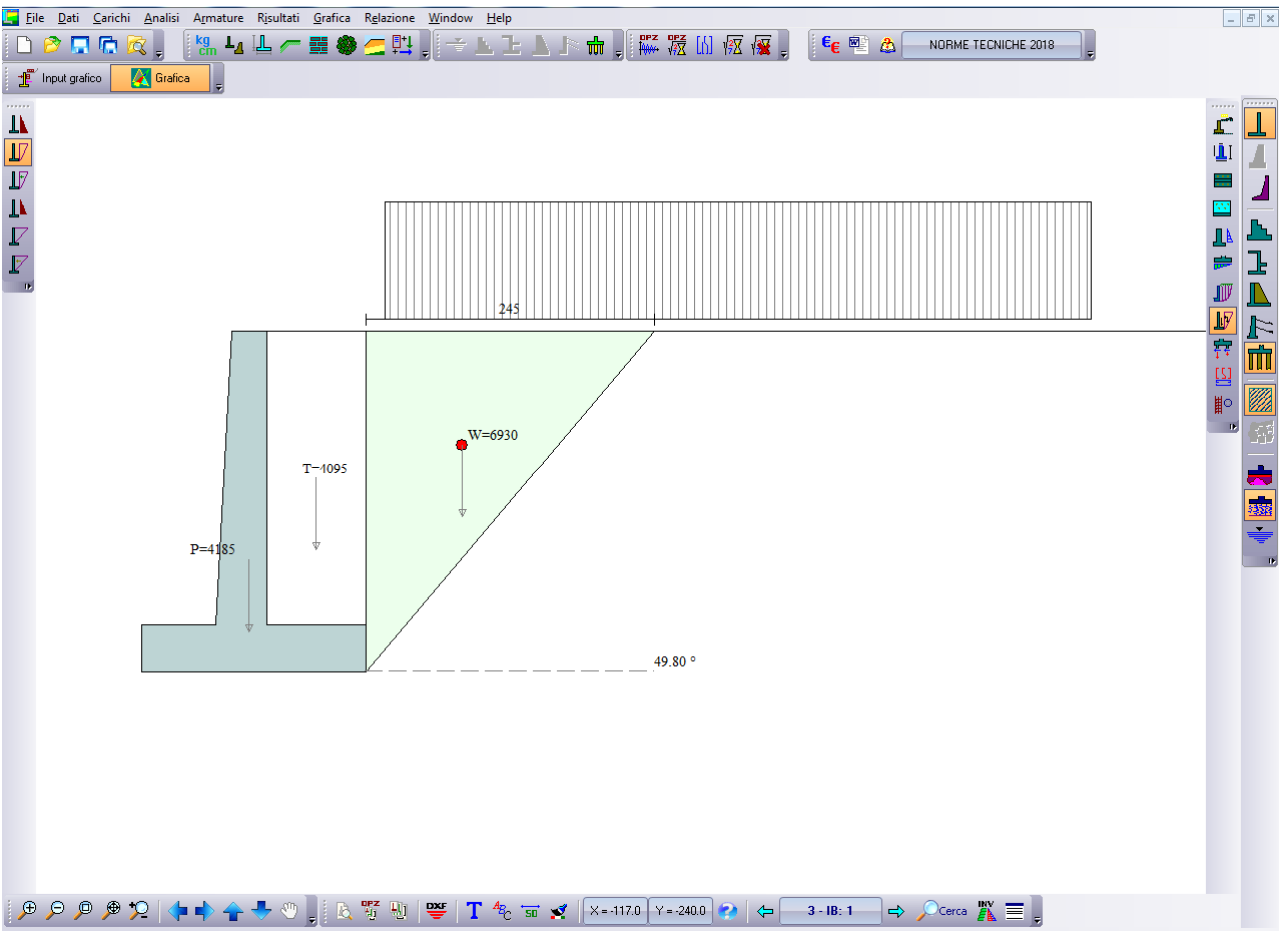
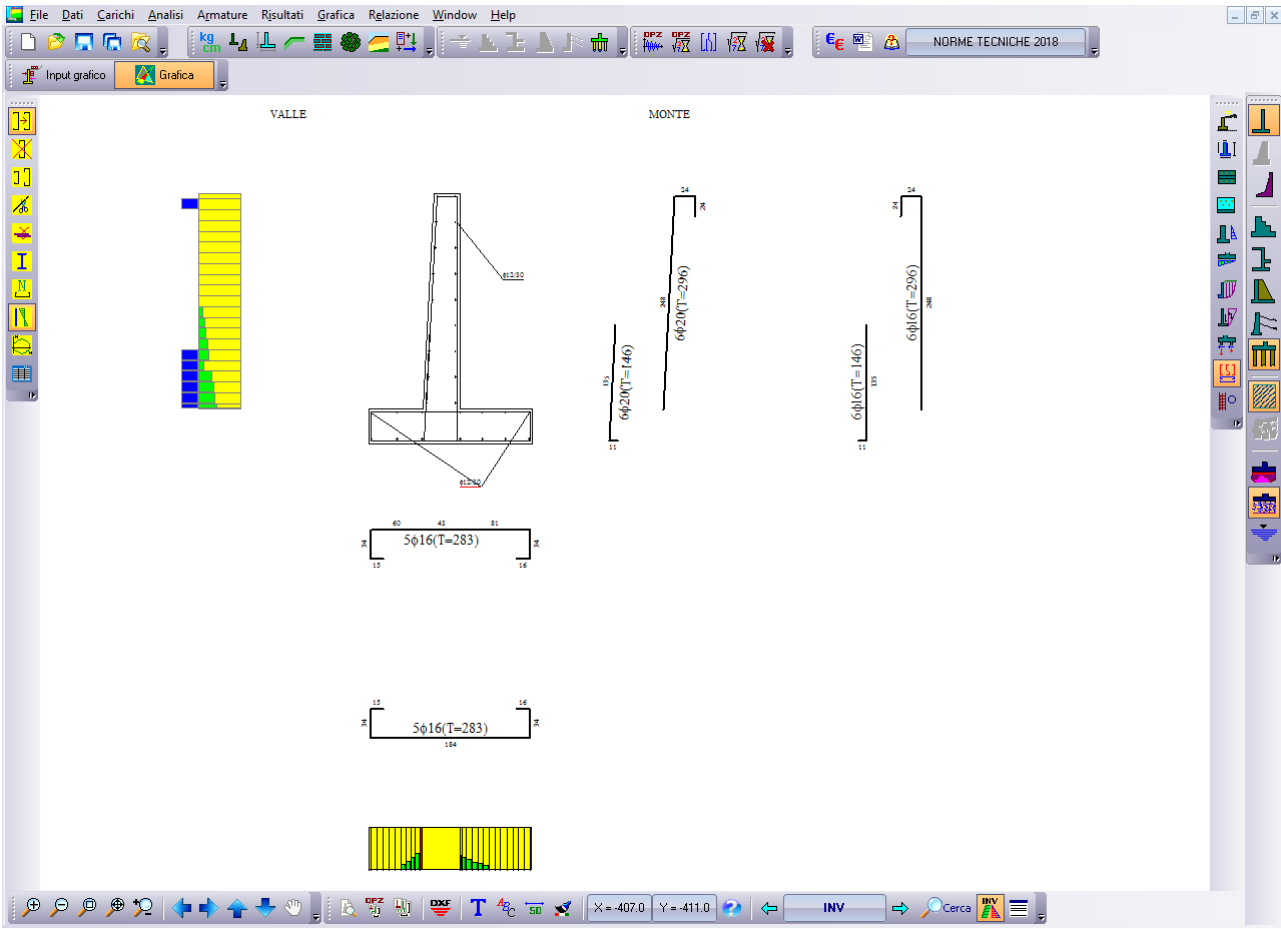
Pali in c.a.	
Numero di file di pali	2
Vincolo pali/fondazione	Cerniera
Tipo di portanza	Portanza laterale e portanza di punta

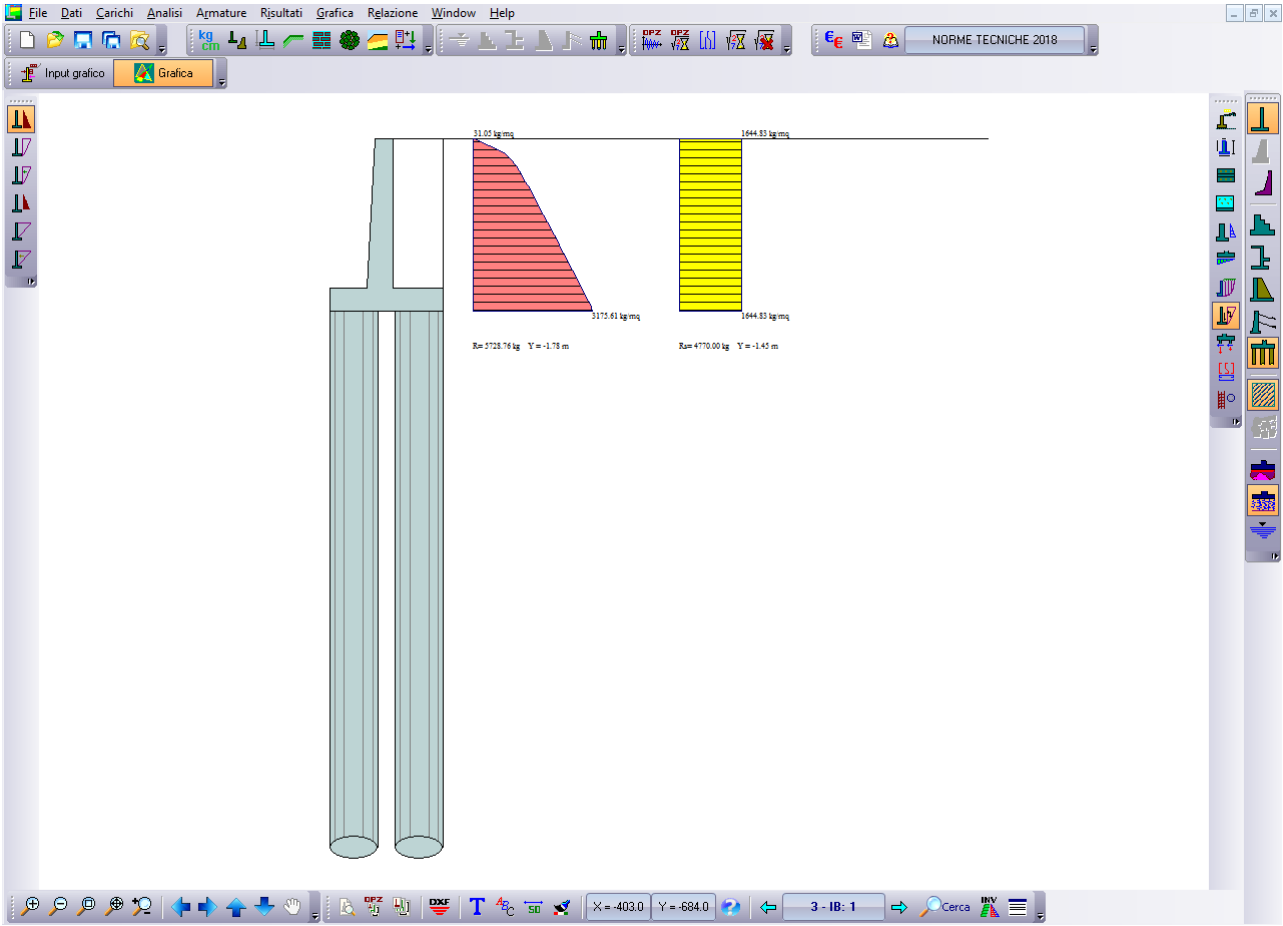
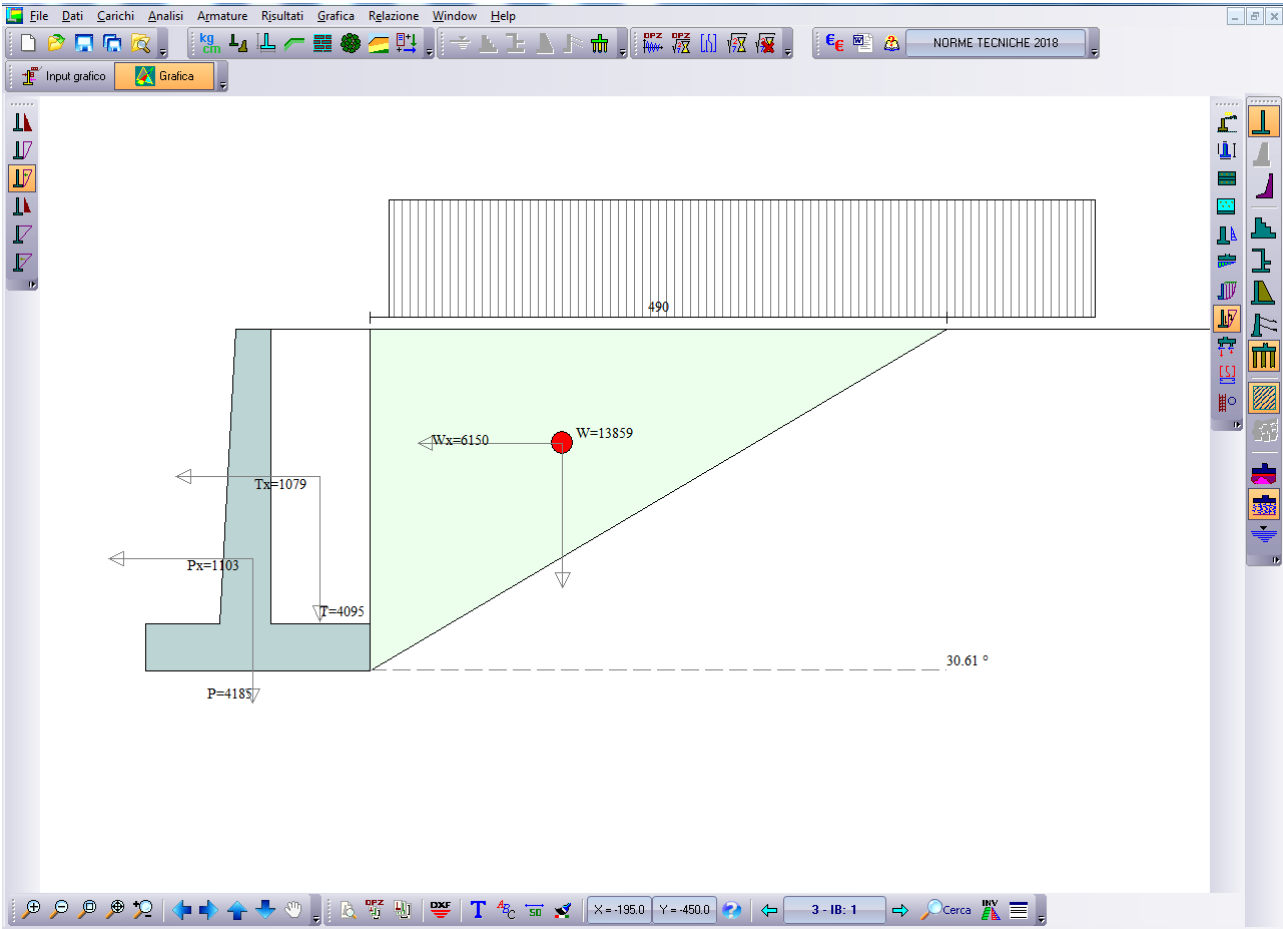
<i>Simbologia adottata</i>	
N	numero d'ordine della fila
X	ascissa della fila misurata dallo spigolo di monte della fondazione espressa in [m]
nr.	Numero di pali della fila
D	diametro dei pali della fila espresso in [cm]
L	lunghezza dei pali della fila espressa in [m]
alfa	inclinazione dei pali della fila rispetto alla verticale espressa in [°]
ALL	allineamento dei pali della fila rispetto al baricentro della fondazione (CENTRATI o SFALSATI)

N	X	Nr.	D	L	alfa	ALL
1	0.40	32	80.00	9.00	0.00	Sfalsati
2	1.50	33	80.00	9.00	0.00	Centrati









Materiali utilizzati per la struttura

Calcestruzzo

Peso specifico	2500.0 [kg/mc]
Classe di Resistenza	C25/30
Resistenza caratteristica a compressione R_{ck}	305.9 [kg/cm ²]
Modulo elastico E	320665.55 [kg/cm ²]

Acciaio

Tipo	B450C
Tensione di snervamento σ_{fa}	4588.0 [kg/cm ²]

Calcestruzzo utilizzato per i pali

Classe di Resistenza	C25/30
Resistenza caratteristica a compressione R_{ck}	306 [kg/cm ²]
Modulo elastico E	320665.55 [kg/cm ²]

Acciaio utilizzato per i pali

Tipo	B450C
Tensione ammissibile σ_{fa}	4588.0 [kg/cm ²]
Tensione di snervamento σ_{fa}	4588.0 [kg/cm ²]

Geometria profilo terreno a monte del muro

Simbologia adottata e sistema di riferimento

(Sistema di riferimento con origine in testa al muro, ascissa X positiva verso monte, ordinata Y positiva verso l'alto)

N numero ordine del punto
 X ascissa del punto espressa in [m]
 Y ordinata del punto espressa in [m]
 A inclinazione del tratto espressa in [°]

N	X	Y	A
1	10.00	0.00	0.00

Terreno a valle del muro

Inclinazione terreno a valle del muro rispetto all'orizzontale	0.00	[°]
Altezza del rinterro rispetto all'attacco fondaz.valle-paramento	0.00	[m]

Descrizione terreni

Simbologia adottata

Nr.	Indice del terreno
Descrizione	Descrizione terreno
γ	Peso di volume del terreno espresso in [kg/mc]
γ_s	Peso di volume saturo del terreno espresso in [kg/mc]
ϕ	Angolo d'attrito interno espresso in [°]
δ	Angolo d'attrito terra-muro espresso in [°]
c	Coesione espressa in [kg/cm ²]
c_a	Adesione terra-muro espressa in [kg/cm ²]

Descrizione	γ	γ_s	ϕ	δ	c	c_a
Terreno 1	1950	2100	21.00	14.00	0.000	0.000
Terreno 2	2000	2150	22.00	14.67	0.150	0.000
Terreno 3	2100	2150	24.00	16.00	0.200	0.000

Parametri medi

Descrizione	γ	γ_s	ϕ	δ	c	c_a
Terreno 1	1950	2100	21.00	14.00	0.000	0.000
Terreno 2	2000	2150	22.00	14.67	0.150	0.000
Terreno 3	2100	2150	24.00	16.00	0.200	0.000

Parametri minimi

Descrizione	γ	γ_s	ϕ	δ	c	c_a
Terreno 1	1950	2100	21.00	14.00	0.000	0.000
Terreno 2	2000	2150	22.00	14.67	0.150	0.000
Terreno 3	2100	2150	24.00	16.00	0.200	0.000

Stratigrafia

Simbologia adottata

N	Indice dello strato
H	Spessore dello strato espresso in [m]
a	Inclinazione espressa in [°]
K _w	Costante di Winkler orizzontale espressa in Kg/cm ² /cm
K _s	Coefficiente di spinta
Terreno	Terreno dello strato

Nr.	H	a	K _w	K _s	Terreno
1	3.60	0.00	0.10	0.50	Terreno 1
2	5.40	0.00	3.89	0.50	Terreno 2
3	30.00	0.00	17.41	0.00	Terreno 3

Terreno di riempimento	Terreno 1
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Condizioni di carico

Simbologia e convenzioni di segno adottate

Carichi verticali positivi verso il basso.

Carichi orizzontali positivi verso sinistra.

Momento positivo senso antiorario.

X	Ascissa del punto di applicazione del carico concentrato espressa in [m]
F_x	Componente orizzontale del carico concentrato espressa in [kg]
F_y	Componente verticale del carico concentrato espressa in [kg]
M	Momento espresso in [kgm]
X_i	Ascissa del punto iniziale del carico ripartito espressa in [m]
X_f	Ascissa del punto finale del carico ripartito espressa in [m]
Q_i	Intensità del carico per $x=X_i$ espressa in [kg/m]
Q_f	Intensità del carico per $x=X_f$ espressa in [kg/m]
D/C	Tipo carico : D=distribuito C=concentrato

Condizione n° 1 (Condizione 1)

D	Profilo	$X_i=1.00$	$X_f=7.00$	$Q_i=2000.00$	$Q_f=2000.00$
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Descrizione combinazioni di carico

Simbologia adottata

F/S Effetto dell'azione (FAV: Favorevole, SFAV: Sfavorevole)

 γ Coefficiente di partecipazione della condizione Ψ Coefficiente di combinazione della condizioneCombinazione n° 1 - Caso A1-M1 (STR) - Sisma Vert. positivo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 2 - Caso A1-M1 (STR) - Sisma Vert. negativo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 3 - Caso EQU (SLU) - Sisma Vert. positivo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	FAV	1.00	1.00	1.00
Peso proprio terrapieno	FAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 4 - Caso EQU (SLU) - Sisma Vert. negativo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	FAV	1.00	1.00	1.00
Peso proprio terrapieno	FAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 5 - Caso A2-M2 (GEO-STAB) - Sisma Vert. positivo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 6 - Caso A2-M2 (GEO-STAB) - Sisma Vert. negativo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 7 - Caso A1-M1 (STR) - Sisma Vert. negativo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 8 - Caso A1-M1 (STR) - Sisma Vert. positivo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 9 - Caso EQU (SLU) - Sisma Vert. negativo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	FAV	1.00	1.00	1.00
Peso proprio terrapieno	FAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 10 - Caso EQU (SLU) - Sisma Vert. positivo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	FAV	1.00	1.00	1.00
Peso proprio terrapieno	FAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00

Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 11 - Caso A2-M2 (GEO-STAB) - Sisma Vert. positivo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 12 - Caso A2-M2 (GEO-STAB) - Sisma Vert. negativo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 13 - Caso A1-M1 (STR) - Sisma Vert. positivo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 14 - Caso A1-M1 (STR) - Sisma Vert. negativo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 15 - Caso EQU (SLU) - Sisma Vert. positivo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	FAV	1.00	1.00	1.00
Peso proprio terrapieno	FAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 16 - Caso EQU (SLU) - Sisma Vert. negativo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	FAV	1.00	1.00	1.00
Peso proprio terrapieno	FAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 17 - Caso A2-M2 (GEO-STAB) - Sisma Vert. positivo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 18 - Caso A2-M2 (GEO-STAB) - Sisma Vert. negativo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	SFAV	1.00	1.00	1.00
Peso proprio terrapieno	SFAV	1.00	1.00	1.00
Spinta terreno	SFAV	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 19 - Quasi Permanente (SLE) - Sisma Vert. positivo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	--	1.00	1.00	1.00
Peso proprio terrapieno	--	1.00	1.00	1.00
Spinta terreno	--	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 20 - Quasi Permanente (SLE) - Sisma Vert. negativo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	--	1.00	1.00	1.00
Peso proprio terrapieno	--	1.00	1.00	1.00
Spinta terreno	--	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00
<u>Combinazione n° 21 - Quasi Permanente (SLE) - Sisma Vert. positivo</u>				
	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	--	1.00	1.00	1.00
Peso proprio terrapieno	--	1.00	1.00	1.00

Spinta terreno	--	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 22 - Quasi Permanente (SLE) - Sisma Vert. negativo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	--	1.00	1.00	1.00
Peso proprio terrapieno	--	1.00	1.00	1.00
Spinta terreno	--	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 23 - Quasi Permanente (SLE) - Sisma Vert. positivo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	--	1.00	1.00	1.00
Peso proprio terrapieno	--	1.00	1.00	1.00
Spinta terreno	--	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Combinazione n° 24 - Quasi Permanente (SLE) - Sisma Vert. negativo

	S/F	γ	Ψ	$\gamma * \Psi$
Peso proprio muro	--	1.00	1.00	1.00
Peso proprio terrapieno	--	1.00	1.00	1.00
Spinta terreno	--	1.00	1.00	1.00
Condizione 1	SFAV	1.00	1.00	1.00

Impostazioni analisi pali

Numero elementi palo 40
Tipo carico palo Distribuito
Calcolo della portanza metodo di Terzaghi
Costante di Winkler da Strato

Criterio di rottura del sistema terreno-palo
 Pressione limite passiva con moltiplicatore pari a 3.00

Andamento pressione verticale
 Geostatica

Impostazioni di analisi

Metodo verifica sezioni

Stato limite

Impostazioni verifiche SLU

Coefficienti parziali per resistenze di calcolo dei materiali

Coefficiente di sicurezza calcestruzzo a compressione	1.50
Coefficiente di sicurezza calcestruzzo a trazione	1.50
Coefficiente di sicurezza acciaio	1.15
Fattore riduzione da resistenza cubica a cilindrica	0.83
Fattore di riduzione per carichi di lungo periodo	0.85
Coefficiente di sicurezza per la sezione	1.00

Impostazioni verifiche SLE

Condizioni ambientali
 Armatura ad aderenza migliorata

Ordinarie

Verifica fessurazione

Sensibilità delle armature
 Valori limite delle aperture delle fessure

Poco sensibile

$w_1 = 0.20$

$w_2 = 0.30$

$w_3 = 0.40$

Circ. Min. 252 (15/10/1996)

Metodo di calcolo aperture delle fessure

Verifica delle tensioni

Combinazione di carico

Rara $\sigma_c < 0.60 f_{ck}$ - $\sigma_f < 0.80 f_{yk}$

Quasi permanente $\sigma_c < 0.45 f_{ck}$

Impostazioni avanzate

Quadro riassuntivo coeff. di sicurezza calcolati

Simbologia adottata

<i>C</i>	Identificativo della combinazione
<i>Tipo</i>	Tipo combinazione
<i>Sisma</i>	Combinazione sismica
<i>CS_{sco}</i>	Coeff. di sicurezza allo scorrimento
<i>CS_{rib}</i>	Coeff. di sicurezza al ribaltamento
<i>CS_{qlim}</i>	Coeff. di sicurezza a carico limite
<i>CS_{stab}</i>	Coeff. di sicurezza a stabilità globale

C	Tipo	Sisma	CS_{sco}	CS_{rib}	CS_{qlim}	CS_{stab}
1	A1-M1 - [1]	Orizzontale + Verticale positivo	--	--	--	--
2	A1-M1 - [1]	Orizzontale + Verticale negativo	--	--	--	--
3	EQU - [1]	Orizzontale + Verticale positivo	--	--	--	--
4	EQU - [1]	Orizzontale + Verticale negativo	--	--	--	--
5	STAB - [1]	Orizzontale + Verticale positivo	--	--	--	2.36
6	STAB - [1]	Orizzontale + Verticale negativo	--	--	--	2.13
7	A1-M1 - [2]	Orizzontale + Verticale negativo	--	--	--	--
8	A1-M1 - [2]	Orizzontale + Verticale positivo	--	--	--	--
9	EQU - [2]	Orizzontale + Verticale negativo	--	--	--	--
10	EQU - [2]	Orizzontale + Verticale positivo	--	--	--	--
11	STAB - [2]	Orizzontale + Verticale positivo	--	--	--	2.36
12	STAB - [2]	Orizzontale + Verticale negativo	--	--	--	2.13
13	A1-M1 - [3]	Orizzontale + Verticale positivo	--	--	--	--
14	A1-M1 - [3]	Orizzontale + Verticale negativo	--	--	--	--
15	EQU - [3]	Orizzontale + Verticale positivo	--	--	--	--
16	EQU - [3]	Orizzontale + Verticale negativo	--	--	--	--
17	STAB - [3]	Orizzontale + Verticale positivo	--	--	--	2.36
18	STAB - [3]	Orizzontale + Verticale negativo	--	--	--	2.13
19	SLEQ - [1]	Orizzontale + Verticale positivo	--	--	--	--
20	SLEQ - [1]	Orizzontale + Verticale negativo	--	--	--	--
21	SLEQ - [2]	Orizzontale + Verticale positivo	--	--	--	--
22	SLEQ - [2]	Orizzontale + Verticale negativo	--	--	--	--
23	SLEQ - [3]	Orizzontale + Verticale positivo	--	--	--	--
24	SLEQ - [3]	Orizzontale + Verticale negativo	--	--	--	--

Analisi della spinta e verifiche

Sistema di riferimento adottato per le coordinate :
 Origine in testa al muro (spigolo di monte)
 Ascisse X (espresse in [m]) positive verso monte
 Ordinate Y (espresse in [m]) positive verso l'alto
 Le forze orizzontali sono considerate positive se agenti da monte verso valle
 Le forze verticali sono considerate positive se agenti dall'alto verso il basso

Calcolo riferito ad 1 metro di muro

Tipo di analisi

Calcolo della spinta	metodo di Culmann
Calcolo della stabilità globale	metodo di Fellenius
Calcolo della spinta in condizioni di	Spinta attiva

Sisma

Identificazione del sito

Latitudine	40.027667
Longitudine	15.775648
Comune	Trecchina
Provincia	Potenza
Regione	Basilicata

Punti di interpolazione del reticolo	36776 - 36777 - 36555 - 36554
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Tipo di opera

Tipo di costruzione	Opera ordinaria
Vita nominale	50 anni
Classe d'uso	II - Normali affollamenti e industrie non pericolose
Vita di riferimento	50 anni
Categoria sottosuolo	B
Categoria topografica	T1

Combinazioni SLU

Accelerazione al suolo a_g	2.16 [m/s ²]
Coefficiente di amplificazione per tipo di sottosuolo (S)	1.20
Coefficiente di amplificazione topografica (St)	1.00
Coefficiente riduzione (β_m)	1.00
Rapporto intensità sismica verticale/orizzontale	0.50
Coefficiente di intensità sismica orizzontale (percento)	$k_h=(a_g/g*\beta_m*St*S) = 26.35$
Coefficiente di intensità sismica verticale (percento)	$k_v=0.50 * k_h = 13.17$

Combinazioni SLE

Accelerazione al suolo a_g	0.67 [m/s ²]
Coefficiente di amplificazione per tipo di sottosuolo (S)	1.20
Coefficiente di amplificazione topografica (St)	1.00
Coefficiente riduzione (β_m)	1.00
Rapporto intensità sismica verticale/orizzontale	0.50
Coefficiente di intensità sismica orizzontale (percento)	$k_h=(a_g/g*\beta_m*St*S) = 8.21$
Coefficiente di intensità sismica verticale (percento)	$k_v=0.50 * k_h = 4.11$

Forma diagramma incremento sismico	Rettangolare
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Partecipazione spinta passiva (percento)	0.0
Lunghezza del muro	60.00 [m]

Peso muro	4185.46 [kg]
Baricentro del muro	X=-0.15 Y=-1.95

Superficie di spinta

Punto inferiore superficie di spinta	X = 0.84 Y = -2.90
Punto superiore superficie di spinta	X = 0.84 Y = 0.00
Altezza della superficie di spinta	2.90 [m]
Inclinazione superficie di spinta(rispetto alla verticale)	0.00 [°]

COMBINAZIONE n° 1

Valore della spinta statica	5728.76 [kg]
Componente orizzontale della spinta statica	5558.59 [kg]

Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	4770.00	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	30.61	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	539.46	[kg]		
<u>Risultanti</u>				
Risultante dei carichi applicati in dir. orizzontale	12368.59	[kg]		
Risultante dei carichi applicati in dir. verticale	11911.18	[kg]		
Sforzo normale sul piano di posa della fondazione	11911.18	[kg]		
Sforzo tangenziale sul piano di posa della fondazione	12368.59	[kg]		
Eccentricità rispetto al baricentro della fondazione	0.93	[m]		
Lunghezza fondazione reagente	0.05	[m]		
Risultante in fondazione	17171.44	[kg]		
Inclinazione della risultante (rispetto alla normale)	46.08	[°]		
Momento rispetto al baricentro della fondazione	11110.82	[kgm]		

Sollecitazioni paramento

Combinazione n° 1

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	13.56	221.53
3	0.25	191.59	55.30	456.05
4	0.38	290.45	126.85	703.56
5	0.50	391.36	229.84	964.41
6	0.63	494.32	366.61	1254.78
7	0.75	599.32	542.22	1590.03
8	0.88	706.36	761.17	1950.71
9	1.00	815.45	1026.06	2330.53
10	1.13	926.58	1339.20	2728.29
11	1.25	1039.77	1702.76	3143.04
12	1.38	1154.99	2118.82	3574.10
13	1.50	1272.26	2589.37	4020.89
14	1.63	1391.58	3116.33	4482.97
15	1.75	1512.94	3701.60	4959.98
16	1.88	1636.35	4347.01	5451.63
17	2.00	1761.80	5054.38	5957.69
18	2.13	1889.30	5825.47	6477.97
19	2.25	2018.84	6662.06	7012.29
20	2.38	2150.43	7565.88	7560.52
21	2.50	2284.06	8538.59	8120.45

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 1

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-22.94	4.17	-1690.22	3288.06
2	0.07	-188.47	323.25	0.00	3241.23
3	0.13	-162.30	526.96	0.00	4350.86
4	0.20	0.00	820.84	0.00	7425.72
5	0.27	0.00	1165.76	0.00	10508.87
6	0.33	0.00	1532.62	0.00	13738.75
7	0.40	0.00	2035.81	0.00	17245.04
8	0.46	0.00	2980.77	-144.64	20874.85
9	0.52	0.00	4153.30	-1379.71	24871.57
10	0.57	0.00	5592.53	-3742.19	29210.91
11	0.63	0.00	7338.55	-3784.13	32394.57
12	1.06	-4561.07	0.00	-12951.91	0.00
13	1.10	-4049.34	0.00	-12720.26	0.00
14	1.17	-3272.17	0.00	-11251.32	0.00
15	1.23	-2611.86	0.00	-9805.75	0.00
16	1.30	-2046.45	0.00	-8502.09	0.00
17	1.37	-1629.05	0.00	-7394.28	0.00
18	1.43	-1287.28	0.00	-6352.87	0.00
19	1.50	-979.75	0.00	-5361.19	0.00
20	1.57	-710.63	0.00	-4405.02	0.00
21	1.63	-482.71	0.00	-3471.59	0.00
22	1.70	-297.53	0.00	-2547.71	0.00
23	1.77	-155.52	1.66	-1756.30	0.00
24	1.83	-56.18	34.17	-1029.98	0.00
25	1.90	0.00	7.01	-484.94	159.27

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-1373.48	0.00	-1519.67	548.35
2	0.13	-1283.01	0.00	-4640.84	3206.56
3	0.27	-937.49	0.00	-7602.83	6681.50
4	0.40	-182.80	49.44	-7688.56	9010.76
5	0.50	-8.95	488.44	-7714.80	6210.95
6	0.63	0.00	930.28	-5763.99	3617.75
7	0.77	0.00	1127.48	-3382.82	1731.25
8	0.90	0.00	1174.33	-1121.25	1121.25
9	1.03	0.00	1127.48	-1731.25	3382.82
10	1.17	0.00	930.28	-3617.75	5763.99
11	1.30	-8.95	488.44	-6210.95	7714.80
12	1.40	-182.80	49.44	-9010.76	7688.56
13	1.53	-937.49	0.00	-6681.50	7602.83
14	1.67	-1283.01	0.00	-3206.56	4640.84
15	1.80	-1373.48	0.00	-1519.67	1519.67
16	1.93	-1283.01	0.00	-4640.84	3206.56
17	2.07	-937.49	0.00	-7602.83	6681.50
18	2.20	-182.80	49.44	-7688.56	9010.76
19	2.30	-8.95	488.44	-7714.80	6210.95
20	2.43	0.00	930.28	-5763.99	3617.75
21	2.57	0.00	1127.48	-3382.82	1731.25
22	2.70	0.00	1174.33	-1121.25	1121.25
23	2.83	0.00	1127.48	-1731.25	3382.82
24	2.97	0.00	930.28	-3617.75	5763.99
25	3.10	-8.95	488.44	-6210.95	7714.80
26	3.20	-182.80	49.44	-9010.76	7688.56
27	3.33	-937.49	0.00	-6681.50	7602.83
28	3.47	-1283.01	0.00	-3206.56	4640.84
29	3.60	-1373.48	0.00	-1519.67	1519.67
30	3.73	-1283.01	0.00	-4640.84	3206.56
31	3.87	-937.49	0.00	-7602.83	6681.50
32	4.00	-182.80	49.44	-7688.56	9010.76
33	4.10	-8.95	488.44	-7714.80	6210.95

34	4.23	0.00	930.28	-5763.99	3617.75
35	4.37	0.00	1127.48	-3382.82	1731.25
36	4.50	0.00	1174.33	-1121.25	1121.25
37	4.63	0.00	1127.48	-1731.25	3382.82
38	4.77	0.00	930.28	-3617.75	5763.99
39	4.90	-8.95	488.44	-6210.95	7714.80
40	5.00	-182.80	49.44	-9010.76	7688.56
41	5.13	-937.49	0.00	-6681.50	7602.83
42	5.27	-1283.01	0.00	-3206.56	4640.84
43	5.40	-1373.48	0.00	-1519.67	1519.67
44	5.53	-1283.01	0.00	-4640.84	3206.56
45	5.67	-937.49	0.00	-7602.83	6681.50
46	5.80	-182.80	49.44	-7688.56	9010.76
47	5.90	-8.95	488.44	-7714.80	6210.95
48	6.03	0.00	930.28	-5763.99	3617.75
49	6.17	0.00	1127.48	-3382.82	1731.25
50	6.30	0.00	1174.33	-1121.25	1121.25
51	6.43	0.00	1127.48	-1731.25	3382.82
52	6.57	0.00	930.28	-3617.75	5763.99
53	6.70	-8.95	488.44	-6210.95	7714.80
54	6.80	-182.80	49.44	-9010.76	7688.56
55	6.93	-937.49	0.00	-6681.50	7602.83
56	7.07	-1283.01	0.00	-3206.56	4640.84
57	7.20	-1373.48	0.00	-1519.67	1519.67
58	7.33	-1283.01	0.00	-4640.84	3206.56
59	7.47	-937.49	0.00	-7602.83	6681.50
60	7.60	-182.80	49.44	-7688.56	9010.76
61	7.70	-8.95	488.44	-7714.80	6210.95
62	7.83	0.00	930.28	-5763.99	3617.75
63	7.97	0.00	1127.48	-3382.82	1731.25
64	8.10	0.00	1174.33	-1121.25	1121.25
65	8.23	0.00	1127.48	-1731.25	3382.82
66	8.37	0.00	930.28	-3617.75	5763.99
67	8.50	-8.95	488.44	-6210.95	7714.80
68	8.60	-182.80	49.44	-9010.76	7688.56
69	8.73	-937.49	0.00	-6681.50	7602.83
70	8.87	-1283.01	0.00	-3206.56	4640.84
71	9.00	-1373.48	0.00	-1519.67	1519.67
72	9.13	-1283.01	0.00	-4640.84	3206.56
73	9.27	-937.49	0.00	-7602.83	6681.50
74	9.40	-182.80	49.44	-7688.56	9010.76
75	9.50	-8.95	488.44	-7714.80	6210.95
76	9.63	0.00	930.28	-5763.99	3617.75
77	9.77	0.00	1127.48	-3382.82	1731.25
78	9.90	0.00	1174.33	-1121.25	1121.25
79	10.03	0.00	1127.48	-1731.25	3382.82
80	10.17	0.00	930.28	-3617.75	5763.99
81	10.30	-8.95	488.44	-6210.95	7714.80
82	10.40	-182.80	49.44	-9010.76	7688.56
83	10.53	-937.49	0.00	-6681.50	7602.83
84	10.67	-1283.01	0.00	-3206.56	4640.84
85	10.80	-1373.48	0.00	-1519.67	1519.67
86	10.93	-1283.01	0.00	-4640.84	3206.56
87	11.07	-937.49	0.00	-7602.83	6681.50
88	11.20	-182.80	49.44	-7688.56	9010.76
89	11.30	-8.95	488.44	-7714.80	6210.95
90	11.43	0.00	930.28	-5763.99	3617.75
91	11.57	0.00	1127.48	-3382.82	1731.25
92	11.70	0.00	1174.33	-1121.25	1121.25
93	11.83	0.00	1127.48	-1731.25	3382.82
94	11.97	0.00	930.28	-3617.75	5763.99
95	12.10	-8.95	488.44	-6210.95	7714.80
96	12.20	-182.80	49.44	-9010.76	7688.56
97	12.33	-937.49	0.00	-6681.50	7602.83
98	12.47	-1283.01	0.00	-3206.56	4640.84
99	12.60	-1373.48	0.00	-1519.67	1519.67
100	12.73	-1283.01	0.00	-4640.84	3206.56
101	12.87	-937.49	0.00	-7602.83	6681.50
102	13.00	-182.80	49.44	-7688.56	9010.76
103	13.10	-8.95	488.44	-7714.80	6210.95
104	13.23	0.00	930.28	-5763.99	3617.75
105	13.37	0.00	1127.48	-3382.82	1731.25
106	13.50	0.00	1174.33	-1121.25	1121.25
107	13.63	0.00	1127.48	-1731.25	3382.82
108	13.77	0.00	930.28	-3617.75	5763.99
109	13.90	-8.95	488.44	-6210.95	7714.80
110	14.00	-182.80	49.44	-9010.76	7688.56

111	14.13	-937.49	0.00	-6681.50	7602.83
112	14.27	-1283.01	0.00	-3206.56	4640.84
113	14.40	-1373.48	0.00	-1519.67	1519.67
114	14.53	-1283.01	0.00	-4640.84	3206.56
115	14.67	-937.49	0.00	-7602.83	6681.50
116	14.80	-182.80	49.44	-7688.56	9010.76
117	14.90	-8.95	488.44	-7714.80	6210.95
118	15.03	0.00	930.28	-5763.99	3617.75
119	15.17	0.00	1127.48	-3382.82	1731.25
120	15.30	0.00	1174.33	-1121.25	1121.25
121	15.43	0.00	1127.48	-1731.25	3382.82
122	15.57	0.00	930.28	-3617.75	5763.99
123	15.70	-8.95	488.44	-6210.95	7714.80
124	15.80	-182.80	49.44	-9010.76	7688.56
125	15.93	-937.49	0.00	-6681.50	7602.83
126	16.07	-1283.01	0.00	-3206.56	4640.84
127	16.20	-1373.48	0.00	-1519.67	1519.67
128	16.33	-1283.01	0.00	-4640.84	3206.56
129	16.47	-937.49	0.00	-7602.83	6681.50
130	16.60	-182.80	49.44	-7688.56	9010.76
131	16.70	-8.95	488.44	-7714.80	6210.95
132	16.83	0.00	930.28	-5763.99	3617.75
133	16.97	0.00	1127.48	-3382.82	1731.25
134	17.10	0.00	1174.33	-1121.25	1121.25
135	17.23	0.00	1127.48	-1731.25	3382.82
136	17.37	0.00	930.28	-3617.75	5763.99
137	17.50	-8.95	488.44	-6210.95	7714.80
138	17.60	-182.80	49.44	-9010.76	7688.56
139	17.73	-937.49	0.00	-6681.50	7602.83
140	17.87	-1283.01	0.00	-3206.56	4640.84
141	18.00	-1373.48	0.00	-1519.67	1519.67
142	18.13	-1283.01	0.00	-4640.84	3206.56
143	18.27	-937.49	0.00	-7602.83	6681.50
144	18.40	-182.80	49.44	-7688.56	9010.76
145	18.50	-8.95	488.44	-7714.80	6210.95
146	18.63	0.00	930.28	-5763.99	3617.75
147	18.77	0.00	1127.48	-3382.82	1731.25
148	18.90	0.00	1174.33	-1121.25	1121.25
149	19.03	0.00	1127.48	-1731.25	3382.82
150	19.17	0.00	930.28	-3617.75	5763.99
151	19.30	-8.95	488.44	-6210.95	7714.80
152	19.40	-182.80	49.44	-9010.76	7688.56
153	19.53	-937.49	0.00	-6681.50	7602.83
154	19.67	-1283.01	0.00	-3206.56	4640.84
155	19.80	-1373.48	0.00	-1519.67	1519.67
156	19.93	-1283.01	0.00	-4640.84	3206.56
157	20.07	-937.49	0.00	-7602.83	6681.50
158	20.20	-182.80	49.44	-7688.56	9010.76
159	20.30	-8.95	488.44	-7714.80	6210.95
160	20.43	0.00	930.28	-5763.99	3617.75
161	20.57	0.00	1127.48	-3382.82	1731.25
162	20.70	0.00	1174.33	-1121.25	1121.25
163	20.83	0.00	1127.48	-1731.25	3382.82
164	20.97	0.00	930.28	-3617.75	5763.99
165	21.10	-8.95	488.44	-6210.95	7714.80
166	21.20	-182.80	49.44	-9010.76	7688.56
167	21.33	-937.49	0.00	-6681.50	7602.83
168	21.47	-1283.01	0.00	-3206.56	4640.84
169	21.60	-1373.48	0.00	-1519.67	1519.67
170	21.73	-1283.01	0.00	-4640.84	3206.56
171	21.87	-937.49	0.00	-7602.83	6681.50
172	22.00	-182.80	49.44	-7688.56	9010.76
173	22.10	-8.95	488.44	-7714.80	6210.95
174	22.23	0.00	930.28	-5763.99	3617.75
175	22.37	0.00	1127.48	-3382.82	1731.25
176	22.50	0.00	1174.33	-1121.25	1121.24
177	22.63	0.00	1127.48	-1731.25	3382.82
178	22.77	0.00	930.28	-3617.76	5763.98
179	22.90	-8.95	488.44	-6210.95	7714.80
180	23.00	-182.80	49.44	-9010.76	7688.56
181	23.13	-937.49	0.00	-6681.50	7602.83
182	23.27	-1283.01	0.00	-3206.55	4640.83
183	23.40	-1373.49	0.00	-1519.68	1519.67
184	23.53	-1283.01	0.00	-4640.85	3206.52
185	23.67	-937.49	0.00	-7602.85	6681.47
186	23.80	-182.80	49.44	-7688.58	9010.76
187	23.90	-8.95	488.43	-7714.82	6210.93

188	24.03	0.00	930.27	-5764.01	3617.73
189	24.17	0.00	1127.46	-3382.85	1731.23
190	24.30	0.00	1174.32	-1121.29	1121.19
191	24.43	0.00	1127.46	-1731.30	3382.75
192	24.57	0.00	930.25	-3617.81	5763.90
193	24.70	-8.95	488.40	-6211.03	7714.69
194	24.80	-182.83	49.44	-9010.98	7688.45
195	24.93	-937.54	0.00	-6681.27	7602.69
196	25.07	-1283.08	0.00	-3206.31	4640.65
197	25.20	-1373.57	0.00	-1519.99	1519.43
198	25.33	-1283.11	0.00	-4641.24	3205.37
199	25.47	-937.63	0.00	-7603.36	6680.44
200	25.60	-182.95	49.43	-7689.18	9010.82
201	25.70	-8.95	488.20	-7715.41	6210.49
202	25.83	0.00	929.99	-5764.75	3617.17
203	25.97	0.00	1127.11	-3383.81	1730.53
204	26.10	0.00	1173.88	-1122.53	1119.58
205	26.23	0.00	1126.89	-1732.74	3380.69
206	26.37	0.00	929.51	-3619.52	5761.22
207	26.50	-8.93	487.42	-6213.43	7711.40
208	26.60	-183.80	49.43	-9017.64	7685.17
209	26.73	-939.09	0.00	-6674.34	7598.35
210	26.87	-1285.06	0.00	-3199.06	4635.07
211	27.00	-1376.12	0.00	-1529.21	1512.25
212	27.13	-1286.24	0.00	-4653.09	3170.34
213	27.27	-941.71	0.00	-7618.88	6649.18
214	27.40	-187.38	49.39	-7707.25	9012.66
215	27.50	-8.92	481.36	-7733.53	6197.07
216	27.63	0.00	921.46	-5787.23	3599.89
217	27.77	0.00	1116.18	-3412.91	1709.36
218	27.90	0.00	1160.50	-1160.04	1071.41
219	28.03	0.00	1109.60	-1777.87	3319.66
220	28.17	0.00	906.84	-3674.44	5682.51
221	28.30	-8.36	456.97	-6292.53	7615.55
222	28.40	-214.12	49.27	-9239.26	7589.60
223	28.53	-988.51	0.00	-6503.13	7472.79
224	28.67	-1349.92	0.00	-3106.08	4474.03
225	28.80	-1462.27	0.00	-1802.60	1317.44
226	28.93	-1396.01	0.00	-5022.49	2057.99
227	29.07	-1090.36	0.00	-8127.81	5616.13
228	29.20	-386.42	42.58	-8097.58	9005.87
229	29.33	-151.84	343.76	-8127.82	5155.12
230	29.47	-128.33	626.42	-6285.98	2358.28
231	29.60	-104.32	680.86	-4512.85	625.24
232	29.73	-79.41	603.97	-3299.85	310.91
233	29.87	-57.50	477.74	-3179.75	575.42
234	30.00	-52.31	16.26	-3215.39	545.33

Armature e tensioni nei materiali del muro

Combinazione n° 1

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
VR _{rd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
VR _{sd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
VR _d	Resistenza al taglio, espresso in [kg]

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Red}	V _{Rsd}
1	0.00	100, 30	10.05	8.04	0	0	1000.00	13007	--	--
2	0.13	100, 31	10.05	8.04	174353	-24938	1839.70	13157	--	--
3	0.25	100, 31	10.05	8.04	63619	-18362	332.06	13305	--	--
4	0.38	100, 32	10.05	8.04	35144	-15348	121.00	13453	--	--
5	0.50	100, 33	10.05	8.04	24405	-14332	62.36	13600	--	--
6	0.63	100, 33	14.07	8.04	25765	-19109	52.12	15369	--	--
7	0.75	100, 34	14.07	8.04	20914	-18922	34.90	15529	--	--
8	0.88	100, 35	14.07	8.04	17540	-18901	24.83	15688	--	--
9	1.00	100, 35	14.07	8.04	15088	-18985	18.50	15847	--	--
10	1.13	100, 36	14.07	8.04	13241	-19137	14.29	16004	--	--
11	1.25	100, 37	14.07	8.04	11808	-19337	11.36	16161	--	--

12	1.38	100, 37	14.07	8.04	10668	-19571	9.24	16317	--	--
13	1.50	100, 38	14.07	8.04	9743	-19829	7.66	16472	--	--
14	1.63	100, 39	14.07	8.04	8978	-20106	6.45	16627	--	--
15	1.75	100, 39	14.07	8.04	8337	-20397	5.51	16780	--	--
16	1.88	100, 40	14.07	8.04	7792	-20700	4.76	16933	--	--
17	2.00	100, 40	28.15	16.08	14293	-41004	8.11	21463	--	--
18	2.13	100, 41	14.07	8.04	6918	-21330	3.66	17237	--	--
19	2.25	100, 42	14.07	8.04	6562	-21654	3.25	17388	--	--
20	2.38	100, 42	14.07	8.04	6248	-21984	2.91	17539	--	--
21	2.50	100, 43	14.07	8.04	5970	-22318	2.61	17689	--	--

Armature e tensioni nei materiali della fondazione

Combinazione n° 1

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
V _{Rcd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
V _{Rsd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
VRd	Resistenza al taglio, espresso in [kg]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	-11345	494.55	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	35.10	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	21.53	15220	--	--
4	0.20	100, 40	8.04	8.04	0	11345	13.82	15220	--	--
5	0.27	100, 40	8.04	8.04	0	11345	9.73	15220	--	--
6	0.33	100, 40	8.04	8.04	0	11345	7.40	98910	118010	98910
7	0.40	100, 40	8.04	8.04	0	11345	5.57	106555	118010	106555
8	0.46	100, 40	8.04	8.04	0	11345	3.81	15220	--	--
9	0.52	100, 40	8.04	8.04	0	11345	2.73	15220	--	--
10	0.57	100, 40	8.04	8.04	0	11345	2.03	15220	--	--
11	0.63	100, 40	8.04	10.05	0	14108	1.92	15220	--	--

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	11345	1000.00	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	201.95	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	72.95	15220	--	--
4	0.20	100, 40	8.04	8.04	0	-11345	38.13	15220	--	--
5	0.27	100, 40	8.04	8.04	0	-11345	23.50	15220	--	--
6	0.33	100, 40	8.04	8.04	0	-11345	15.96	15220	--	--
7	0.40	100, 40	8.04	8.04	0	-11345	11.58	15220	--	--
8	0.47	100, 40	8.04	8.04	0	-11345	8.81	15220	--	--
9	0.53	100, 40	8.04	8.04	0	-11345	6.96	15220	--	--
10	0.60	100, 40	8.04	8.04	0	-11345	5.54	15220	--	--
11	0.67	100, 40	8.04	8.04	0	-11345	4.34	15220	--	--
12	0.73	100, 40	8.04	8.04	0	-11345	3.47	15220	--	--
13	0.80	100, 40	8.04	8.04	0	-11345	2.80	15220	--	--
14	0.84	100, 40	8.04	8.04	0	-11345	2.49	15220	--	--

Armature e tensioni piastre

Combinazione n° 1

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	10.72
2	0.13	2.83	2.83	0	-4090	11.43

3	0.27	2.83	2.83	0	-4090	14.76
4	0.40	2.83	2.83	0	-4090	31.30
5	0.50	2.83	2.83	0	4090	66.61
6	0.63	2.83	2.83	0	4090	14.71
7	0.77	2.83	2.83	0	4090	10.40
8	0.90	2.83	2.83	0	4090	9.55
9	1.03	2.83	2.83	0	4090	10.40
10	1.17	2.83	2.83	0	4090	14.71
11	1.30	2.83	2.83	0	4090	66.61
12	1.40	2.83	2.83	0	-4090	31.30
13	1.53	2.83	2.83	0	-4090	14.76
14	1.67	2.83	2.83	0	-4090	11.43
15	1.80	2.83	2.83	0	-4090	10.72
16	1.93	2.83	2.83	0	-4090	11.43
17	2.07	2.83	2.83	0	-4090	14.76
18	2.20	2.83	2.83	0	-4090	31.30
19	2.30	2.83	2.83	0	4090	66.61
20	2.43	2.83	2.83	0	4090	14.71
21	2.57	2.83	2.83	0	4090	10.40
22	2.70	2.83	2.83	0	4090	9.55
23	2.83	2.83	2.83	0	4090	10.40
24	2.97	2.83	2.83	0	4090	14.71
25	3.10	2.83	2.83	0	4090	66.61
26	3.20	2.83	2.83	0	-4090	31.30
27	3.33	2.83	2.83	0	-4090	14.76
28	3.47	2.83	2.83	0	-4090	11.43
29	3.60	2.83	2.83	0	-4090	10.72
30	3.73	2.83	2.83	0	-4090	11.43
31	3.87	2.83	2.83	0	-4090	14.76
32	4.00	2.83	2.83	0	-4090	31.30
33	4.10	2.83	2.83	0	4090	66.61
34	4.23	2.83	2.83	0	4090	14.71
35	4.37	2.83	2.83	0	4090	10.40
36	4.50	2.83	2.83	0	4090	9.55
37	4.63	2.83	2.83	0	4090	10.40
38	4.77	2.83	2.83	0	4090	14.71
39	4.90	2.83	2.83	0	4090	66.61
40	5.00	2.83	2.83	0	-4090	31.30
41	5.13	2.83	2.83	0	-4090	14.76
42	5.27	2.83	2.83	0	-4090	11.43
43	5.40	2.83	2.83	0	-4090	10.72
44	5.53	2.83	2.83	0	-4090	11.43
45	5.67	2.83	2.83	0	-4090	14.76
46	5.80	2.83	2.83	0	-4090	31.30
47	5.90	2.83	2.83	0	4090	66.61
48	6.03	2.83	2.83	0	4090	14.71
49	6.17	2.83	2.83	0	4090	10.40
50	6.30	2.83	2.83	0	4090	9.55
51	6.43	2.83	2.83	0	4090	10.40
52	6.57	2.83	2.83	0	4090	14.71
53	6.70	2.83	2.83	0	4090	66.61
54	6.80	2.83	2.83	0	-4090	31.30
55	6.93	2.83	2.83	0	-4090	14.76
56	7.07	2.83	2.83	0	-4090	11.43
57	7.20	2.83	2.83	0	-4090	10.72
58	7.33	2.83	2.83	0	-4090	11.43
59	7.47	2.83	2.83	0	-4090	14.76
60	7.60	2.83	2.83	0	-4090	31.30
61	7.70	2.83	2.83	0	4090	66.61
62	7.83	2.83	2.83	0	4090	14.71
63	7.97	2.83	2.83	0	4090	10.40
64	8.10	2.83	2.83	0	4090	9.55
65	8.23	2.83	2.83	0	4090	10.40
66	8.37	2.83	2.83	0	4090	14.71
67	8.50	2.83	2.83	0	4090	66.61
68	8.60	2.83	2.83	0	-4090	31.30
69	8.73	2.83	2.83	0	-4090	14.76
70	8.87	2.83	2.83	0	-4090	11.43
71	9.00	2.83	2.83	0	-4090	10.72
72	9.13	2.83	2.83	0	-4090	11.43
73	9.27	2.83	2.83	0	-4090	14.76
74	9.40	2.83	2.83	0	-4090	31.30
75	9.50	2.83	2.83	0	4090	66.61
76	9.63	2.83	2.83	0	4090	14.71
77	9.77	2.83	2.83	0	4090	10.40
78	9.90	2.83	2.83	0	4090	9.55
79	10.03	2.83	2.83	0	4090	10.40

80	10.17	2.83	2.83	0	4090	14.71
81	10.30	2.83	2.83	0	4090	66.61
82	10.40	2.83	2.83	0	-4090	31.30
83	10.53	2.83	2.83	0	-4090	14.76
84	10.67	2.83	2.83	0	-4090	11.43
85	10.80	2.83	2.83	0	-4090	10.72
86	10.93	2.83	2.83	0	-4090	11.43
87	11.07	2.83	2.83	0	-4090	14.76
88	11.20	2.83	2.83	0	-4090	31.30
89	11.30	2.83	2.83	0	4090	66.61
90	11.43	2.83	2.83	0	4090	14.71
91	11.57	2.83	2.83	0	4090	10.40
92	11.70	2.83	2.83	0	4090	9.55
93	11.83	2.83	2.83	0	4090	10.40
94	11.97	2.83	2.83	0	4090	14.71
95	12.10	2.83	2.83	0	4090	66.61
96	12.20	2.83	2.83	0	-4090	31.30
97	12.33	2.83	2.83	0	-4090	14.76
98	12.47	2.83	2.83	0	-4090	11.43
99	12.60	2.83	2.83	0	-4090	10.72
100	12.73	2.83	2.83	0	-4090	11.43
101	12.87	2.83	2.83	0	-4090	14.76
102	13.00	2.83	2.83	0	-4090	31.30
103	13.10	2.83	2.83	0	4090	66.61
104	13.23	2.83	2.83	0	4090	14.71
105	13.37	2.83	2.83	0	4090	10.40
106	13.50	2.83	2.83	0	4090	9.55
107	13.63	2.83	2.83	0	4090	10.40
108	13.77	2.83	2.83	0	4090	14.71
109	13.90	2.83	2.83	0	4090	66.61
110	14.00	2.83	2.83	0	-4090	31.30
111	14.13	2.83	2.83	0	-4090	14.76
112	14.27	2.83	2.83	0	-4090	11.43
113	14.40	2.83	2.83	0	-4090	10.72
114	14.53	2.83	2.83	0	-4090	11.43
115	14.67	2.83	2.83	0	-4090	14.76
116	14.80	2.83	2.83	0	-4090	31.30
117	14.90	2.83	2.83	0	4090	66.61
118	15.03	2.83	2.83	0	4090	14.71
119	15.17	2.83	2.83	0	4090	10.40
120	15.30	2.83	2.83	0	4090	9.55
121	15.43	2.83	2.83	0	4090	10.40
122	15.57	2.83	2.83	0	4090	14.71
123	15.70	2.83	2.83	0	4090	66.61
124	15.80	2.83	2.83	0	-4090	31.30
125	15.93	2.83	2.83	0	-4090	14.76
126	16.07	2.83	2.83	0	-4090	11.43
127	16.20	2.83	2.83	0	-4090	10.72
128	16.33	2.83	2.83	0	-4090	11.43
129	16.47	2.83	2.83	0	-4090	14.76
130	16.60	2.83	2.83	0	-4090	31.30
131	16.70	2.83	2.83	0	4090	66.61
132	16.83	2.83	2.83	0	4090	14.71
133	16.97	2.83	2.83	0	4090	10.40
134	17.10	2.83	2.83	0	4090	9.55
135	17.23	2.83	2.83	0	4090	10.40
136	17.37	2.83	2.83	0	4090	14.71
137	17.50	2.83	2.83	0	4090	66.61
138	17.60	2.83	2.83	0	-4090	31.30
139	17.73	2.83	2.83	0	-4090	14.76
140	17.87	2.83	2.83	0	-4090	11.43
141	18.00	2.83	2.83	0	-4090	10.72
142	18.13	2.83	2.83	0	-4090	11.43
143	18.27	2.83	2.83	0	-4090	14.76
144	18.40	2.83	2.83	0	-4090	31.30
145	18.50	2.83	2.83	0	4090	66.61
146	18.63	2.83	2.83	0	4090	14.71
147	18.77	2.83	2.83	0	4090	10.40
148	18.90	2.83	2.83	0	4090	9.55
149	19.03	2.83	2.83	0	4090	10.40
150	19.17	2.83	2.83	0	4090	14.71
151	19.30	2.83	2.83	0	4090	66.61
152	19.40	2.83	2.83	0	-4090	31.30
153	19.53	2.83	2.83	0	-4090	14.76
154	19.67	2.83	2.83	0	-4090	11.43
155	19.80	2.83	2.83	0	-4090	10.72
156	19.93	2.83	2.83	0	-4090	11.43

157	20.07	2.83	2.83	0	-4090	14.76
158	20.20	2.83	2.83	0	-4090	31.30
159	20.30	2.83	2.83	0	4090	66.61
160	20.43	2.83	2.83	0	4090	14.71
161	20.57	2.83	2.83	0	4090	10.40
162	20.70	2.83	2.83	0	4090	9.55
163	20.83	2.83	2.83	0	4090	10.40
164	20.97	2.83	2.83	0	4090	14.71
165	21.10	2.83	2.83	0	4090	66.61
166	21.20	2.83	2.83	0	-4090	31.30
167	21.33	2.83	2.83	0	-4090	14.76
168	21.47	2.83	2.83	0	-4090	11.43
169	21.60	2.83	2.83	0	-4090	10.72
170	21.73	2.83	2.83	0	-4090	11.43
171	21.87	2.83	2.83	0	-4090	14.76
172	22.00	2.83	2.83	0	-4090	31.31
173	22.10	2.83	2.83	0	4090	66.59
174	22.23	2.83	2.83	0	4090	14.71
175	22.37	2.83	2.83	0	4090	10.40
176	22.50	2.83	2.83	0	4090	9.55
177	22.63	2.83	2.83	0	4090	10.40
178	22.77	2.83	2.83	0	4090	14.71
179	22.90	2.83	2.83	0	4090	66.55
180	23.00	2.83	2.83	0	-4090	31.32
181	23.13	2.83	2.83	0	-4090	14.76
182	23.27	2.83	2.83	0	-4090	11.44
183	23.40	2.83	2.83	0	-4090	10.73
184	23.53	2.83	2.83	0	-4090	11.44
185	23.67	2.83	2.83	0	-4090	14.77
186	23.80	2.83	2.83	0	-4090	31.36
187	23.90	2.83	2.83	0	4090	66.36
188	24.03	2.83	2.83	0	4090	14.69
189	24.17	2.83	2.83	0	4090	10.39
190	24.30	2.83	2.83	0	4090	9.54
191	24.43	2.83	2.83	0	4090	10.38
192	24.57	2.83	2.83	0	4090	14.67
193	24.70	2.83	2.83	0	4090	65.82
194	24.80	2.83	2.83	0	-4090	31.55
195	24.93	2.83	2.83	0	-4090	14.82
196	25.07	2.83	2.83	0	-4090	11.48
197	25.20	2.83	2.83	0	-4090	10.77
198	25.33	2.83	2.83	0	-4090	11.50
199	25.47	2.83	2.83	0	-4090	14.89
200	25.60	2.83	2.83	0	-4090	32.06
201	25.70	2.83	2.83	0	4090	63.43
202	25.83	2.83	2.83	0	4090	14.49
203	25.97	2.83	2.83	0	4090	10.26
204	26.10	2.83	2.83	0	4090	9.41
205	26.23	2.83	2.83	0	4090	10.20
206	26.37	2.83	2.83	0	4090	14.25
207	26.50	2.83	2.83	0	4090	57.39
208	26.60	2.83	2.83	0	-4090	34.87
209	26.73	2.83	2.83	0	-4090	15.65
210	26.87	2.83	2.83	0	-4090	12.08
211	27.00	2.83	2.83	0	-4090	11.40
212	27.13	2.83	2.83	0	-4090	12.39
213	27.27	2.83	2.83	0	-4090	16.82
214	27.40	2.83	2.83	0	-4090	46.34
215	27.50	2.83	2.83	0	4090	38.26
216	27.63	2.83	2.83	0	4090	12.12
217	27.77	2.83	2.83	0	4090	8.79
218	27.90	2.83	2.83	0	4090	7.94
219	28.03	2.83	2.83	0	4090	8.25
220	28.17	2.83	2.83	0	4090	10.22
221	28.30	2.83	2.83	0	4090	20.39
222	28.40	2.83	2.83	0	-4090	108.95
223	28.53	2.83	2.83	0	-4090	40.22
224	28.67	2.83	2.83	0	-4090	23.60
225	28.80	2.83	2.83	0	-4090	20.21
226	28.93	2.83	2.83	0	-4090	19.91
227	29.07	2.83	2.83	0	-4090	21.14
228	29.20	2.83	2.83	0	-4090	23.51
229	29.33	2.83	2.83	0	-4090	26.93
230	29.47	2.83	2.83	0	-4090	31.87
231	29.60	2.83	2.83	0	4090	39.21
232	29.73	2.83	2.83	0	4090	51.50
233	29.87	2.83	2.83	0	4090	71.12

234 30.00 2.83 2.83 0 4090 251.51

Piastra fondazione valle

Nr.	X	A _R	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	2.98
2	0.13	2.83	2.83	0	-4090	3.19
3	0.27	2.83	2.83	0	-4090	4.36
4	0.40	2.83	2.83	0	-4090	22.37
5	0.50	2.83	2.83	0	4090	8.37
6	0.63	2.83	2.83	0	4090	4.40
7	0.77	2.83	2.83	0	4090	3.63
8	0.90	2.83	2.83	0	4090	3.48
9	1.03	2.83	2.83	0	4090	3.63
10	1.17	2.83	2.83	0	4090	4.40
11	1.30	2.83	2.83	0	4090	8.37
12	1.40	2.83	2.83	0	-4090	22.37
13	1.53	2.83	2.83	0	-4090	4.36
14	1.67	2.83	2.83	0	-4090	3.19
15	1.80	2.83	2.83	0	-4090	2.98
16	1.93	2.83	2.83	0	-4090	3.19
17	2.07	2.83	2.83	0	-4090	4.36
18	2.20	2.83	2.83	0	-4090	22.37
19	2.30	2.83	2.83	0	4090	8.37
20	2.43	2.83	2.83	0	4090	4.40
21	2.57	2.83	2.83	0	4090	3.63
22	2.70	2.83	2.83	0	4090	3.48
23	2.83	2.83	2.83	0	4090	3.63
24	2.97	2.83	2.83	0	4090	4.40
25	3.10	2.83	2.83	0	4090	8.37
26	3.20	2.83	2.83	0	-4090	22.37
27	3.33	2.83	2.83	0	-4090	4.36
28	3.47	2.83	2.83	0	-4090	3.19
29	3.60	2.83	2.83	0	-4090	2.98
30	3.73	2.83	2.83	0	-4090	3.19
31	3.87	2.83	2.83	0	-4090	4.36
32	4.00	2.83	2.83	0	-4090	22.37
33	4.10	2.83	2.83	0	4090	8.37
34	4.23	2.83	2.83	0	4090	4.40
35	4.37	2.83	2.83	0	4090	3.63
36	4.50	2.83	2.83	0	4090	3.48
37	4.63	2.83	2.83	0	4090	3.63
38	4.77	2.83	2.83	0	4090	4.40
39	4.90	2.83	2.83	0	4090	8.37
40	5.00	2.83	2.83	0	-4090	22.37
41	5.13	2.83	2.83	0	-4090	4.36
42	5.27	2.83	2.83	0	-4090	3.19
43	5.40	2.83	2.83	0	-4090	2.98
44	5.53	2.83	2.83	0	-4090	3.19
45	5.67	2.83	2.83	0	-4090	4.36
46	5.80	2.83	2.83	0	-4090	22.37
47	5.90	2.83	2.83	0	4090	8.37
48	6.03	2.83	2.83	0	4090	4.40
49	6.17	2.83	2.83	0	4090	3.63
50	6.30	2.83	2.83	0	4090	3.48
51	6.43	2.83	2.83	0	4090	3.63
52	6.57	2.83	2.83	0	4090	4.40
53	6.70	2.83	2.83	0	4090	8.37
54	6.80	2.83	2.83	0	-4090	22.37
55	6.93	2.83	2.83	0	-4090	4.36
56	7.07	2.83	2.83	0	-4090	3.19
57	7.20	2.83	2.83	0	-4090	2.98
58	7.33	2.83	2.83	0	-4090	3.19
59	7.47	2.83	2.83	0	-4090	4.36
60	7.60	2.83	2.83	0	-4090	22.37
61	7.70	2.83	2.83	0	4090	8.37
62	7.83	2.83	2.83	0	4090	4.40
63	7.97	2.83	2.83	0	4090	3.63
64	8.10	2.83	2.83	0	4090	3.48
65	8.23	2.83	2.83	0	4090	3.63
66	8.37	2.83	2.83	0	4090	4.40
67	8.50	2.83	2.83	0	4090	8.37
68	8.60	2.83	2.83	0	-4090	22.37
69	8.73	2.83	2.83	0	-4090	4.36
70	8.87	2.83	2.83	0	-4090	3.19
71	9.00	2.83	2.83	0	-4090	2.98
72	9.13	2.83	2.83	0	-4090	3.19

73	9.27	2.83	2.83	0	-4090	4.36
74	9.40	2.83	2.83	0	-4090	22.37
75	9.50	2.83	2.83	0	4090	8.37
76	9.63	2.83	2.83	0	4090	4.40
77	9.77	2.83	2.83	0	4090	3.63
78	9.90	2.83	2.83	0	4090	3.48
79	10.03	2.83	2.83	0	4090	3.63
80	10.17	2.83	2.83	0	4090	4.40
81	10.30	2.83	2.83	0	4090	8.37
82	10.40	2.83	2.83	0	-4090	22.37
83	10.53	2.83	2.83	0	-4090	4.36
84	10.67	2.83	2.83	0	-4090	3.19
85	10.80	2.83	2.83	0	-4090	2.98
86	10.93	2.83	2.83	0	-4090	3.19
87	11.07	2.83	2.83	0	-4090	4.36
88	11.20	2.83	2.83	0	-4090	22.37
89	11.30	2.83	2.83	0	4090	8.37
90	11.43	2.83	2.83	0	4090	4.40
91	11.57	2.83	2.83	0	4090	3.63
92	11.70	2.83	2.83	0	4090	3.48
93	11.83	2.83	2.83	0	4090	3.63
94	11.97	2.83	2.83	0	4090	4.40
95	12.10	2.83	2.83	0	4090	8.37
96	12.20	2.83	2.83	0	-4090	22.37
97	12.33	2.83	2.83	0	-4090	4.36
98	12.47	2.83	2.83	0	-4090	3.19
99	12.60	2.83	2.83	0	-4090	2.98
100	12.73	2.83	2.83	0	-4090	3.19
101	12.87	2.83	2.83	0	-4090	4.36
102	13.00	2.83	2.83	0	-4090	22.37
103	13.10	2.83	2.83	0	4090	8.37
104	13.23	2.83	2.83	0	4090	4.40
105	13.37	2.83	2.83	0	4090	3.63
106	13.50	2.83	2.83	0	4090	3.48
107	13.63	2.83	2.83	0	4090	3.63
108	13.77	2.83	2.83	0	4090	4.40
109	13.90	2.83	2.83	0	4090	8.37
110	14.00	2.83	2.83	0	-4090	22.37
111	14.13	2.83	2.83	0	-4090	4.36
112	14.27	2.83	2.83	0	-4090	3.19
113	14.40	2.83	2.83	0	-4090	2.98
114	14.53	2.83	2.83	0	-4090	3.19
115	14.67	2.83	2.83	0	-4090	4.36
116	14.80	2.83	2.83	0	-4090	22.37
117	14.90	2.83	2.83	0	4090	8.37
118	15.03	2.83	2.83	0	4090	4.40
119	15.17	2.83	2.83	0	4090	3.63
120	15.30	2.83	2.83	0	4090	3.48
121	15.43	2.83	2.83	0	4090	3.63
122	15.57	2.83	2.83	0	4090	4.40
123	15.70	2.83	2.83	0	4090	8.37
124	15.80	2.83	2.83	0	-4090	22.37
125	15.93	2.83	2.83	0	-4090	4.36
126	16.07	2.83	2.83	0	-4090	3.19
127	16.20	2.83	2.83	0	-4090	2.98
128	16.33	2.83	2.83	0	-4090	3.19
129	16.47	2.83	2.83	0	-4090	4.36
130	16.60	2.83	2.83	0	-4090	22.37
131	16.70	2.83	2.83	0	4090	8.37
132	16.83	2.83	2.83	0	4090	4.40
133	16.97	2.83	2.83	0	4090	3.63
134	17.10	2.83	2.83	0	4090	3.48
135	17.23	2.83	2.83	0	4090	3.63
136	17.37	2.83	2.83	0	4090	4.40
137	17.50	2.83	2.83	0	4090	8.37
138	17.60	2.83	2.83	0	-4090	22.37
139	17.73	2.83	2.83	0	-4090	4.36
140	17.87	2.83	2.83	0	-4090	3.19
141	18.00	2.83	2.83	0	-4090	2.98
142	18.13	2.83	2.83	0	-4090	3.19
143	18.27	2.83	2.83	0	-4090	4.36
144	18.40	2.83	2.83	0	-4090	22.37
145	18.50	2.83	2.83	0	4090	8.37
146	18.63	2.83	2.83	0	4090	4.40
147	18.77	2.83	2.83	0	4090	3.63
148	18.90	2.83	2.83	0	4090	3.48
149	19.03	2.83	2.83	0	4090	3.63

150	19.17	2.83	2.83	0	4090	4.40
151	19.30	2.83	2.83	0	4090	8.37
152	19.40	2.83	2.83	0	-4090	22.37
153	19.53	2.83	2.83	0	-4090	4.36
154	19.67	2.83	2.83	0	-4090	3.19
155	19.80	2.83	2.83	0	-4090	2.98
156	19.93	2.83	2.83	0	-4090	3.19
157	20.07	2.83	2.83	0	-4090	4.36
158	20.20	2.83	2.83	0	-4090	22.37
159	20.30	2.83	2.83	0	4090	8.37
160	20.43	2.83	2.83	0	4090	4.40
161	20.57	2.83	2.83	0	4090	3.63
162	20.70	2.83	2.83	0	4090	3.48
163	20.83	2.83	2.83	0	4090	3.63
164	20.97	2.83	2.83	0	4090	4.40
165	21.10	2.83	2.83	0	4090	8.37
166	21.20	2.83	2.83	0	-4090	22.37
167	21.33	2.83	2.83	0	-4090	4.36
168	21.47	2.83	2.83	0	-4090	3.19
169	21.60	2.83	2.83	0	-4090	2.98
170	21.73	2.83	2.83	0	-4090	3.19
171	21.87	2.83	2.83	0	-4090	4.36
172	22.00	2.83	2.83	0	-4090	22.37
173	22.10	2.83	2.83	0	4090	8.37
174	22.23	2.83	2.83	0	4090	4.40
175	22.37	2.83	2.83	0	4090	3.63
176	22.50	2.83	2.83	0	4090	3.48
177	22.63	2.83	2.83	0	4090	3.63
178	22.77	2.83	2.83	0	4090	4.40
179	22.90	2.83	2.83	0	4090	8.37
180	23.00	2.83	2.83	0	-4090	22.37
181	23.13	2.83	2.83	0	-4090	4.36
182	23.27	2.83	2.83	0	-4090	3.19
183	23.40	2.83	2.83	0	-4090	2.98
184	23.53	2.83	2.83	0	-4090	3.19
185	23.67	2.83	2.83	0	-4090	4.36
186	23.80	2.83	2.83	0	-4090	22.37
187	23.90	2.83	2.83	0	4090	8.37
188	24.03	2.83	2.83	0	4090	4.40
189	24.17	2.83	2.83	0	4090	3.63
190	24.30	2.83	2.83	0	4090	3.48
191	24.43	2.83	2.83	0	4090	3.63
192	24.57	2.83	2.83	0	4090	4.40
193	24.70	2.83	2.83	0	4090	8.37
194	24.80	2.83	2.83	0	-4090	22.37
195	24.93	2.83	2.83	0	-4090	4.36
196	25.07	2.83	2.83	0	-4090	3.19
197	25.20	2.83	2.83	0	-4090	2.98
198	25.33	2.83	2.83	0	-4090	3.19
199	25.47	2.83	2.83	0	-4090	4.36
200	25.60	2.83	2.83	0	-4090	22.36
201	25.70	2.83	2.83	0	4090	8.38
202	25.83	2.83	2.83	0	4090	4.40
203	25.97	2.83	2.83	0	4090	3.63
204	26.10	2.83	2.83	0	4090	3.48
205	26.23	2.83	2.83	0	4090	3.63
206	26.37	2.83	2.83	0	4090	4.40
207	26.50	2.83	2.83	0	4090	8.39
208	26.60	2.83	2.83	0	-4090	22.25
209	26.73	2.83	2.83	0	-4090	4.36
210	26.87	2.83	2.83	0	-4090	3.18
211	27.00	2.83	2.83	0	-4090	2.97
212	27.13	2.83	2.83	0	-4090	3.18
213	27.27	2.83	2.83	0	-4090	4.34
214	27.40	2.83	2.83	0	-4090	21.83
215	27.50	2.83	2.83	0	4090	8.50
216	27.63	2.83	2.83	0	4090	4.44
217	27.77	2.83	2.83	0	4090	3.66
218	27.90	2.83	2.83	0	4090	3.52
219	28.03	2.83	2.83	0	4090	3.69
220	28.17	2.83	2.83	0	4090	4.51
221	28.30	2.83	2.83	0	4090	8.95
222	28.40	2.83	2.83	0	-4090	19.10
223	28.53	2.83	2.83	0	-4090	4.14
224	28.67	2.83	2.83	0	-4090	3.03
225	28.80	2.83	2.83	0	-4090	2.80
226	28.93	2.83	2.83	0	-4090	2.93

227	29.07	2.83	2.83	0	-4090	3.75
228	29.20	2.83	2.83	0	-4090	10.58
229	29.33	2.83	2.83	0	4090	11.90
230	29.47	2.83	2.83	0	4090	6.53
231	29.60	2.83	2.83	0	4090	6.01
232	29.73	2.83	2.83	0	4090	6.77
233	29.87	2.83	2.83	0	4090	8.56
234	30.00	2.83	2.83	0	-4090	78.19

Analisi dei pali

Combinazione n° 1

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	12368.6
Verticale	[kg]	11911.2
Momento	[kgm]	-11110.8

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.39366
Verticale	[cm]	0.00599
Rotazione	[°]	-0.01076

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]	Tr [kg]	Mr [kgm]
1	32	-7783	11417	0	37189	0
2	33	29203	11417	0	37189	0

Dettagli calcolo della portanza

τ_m	tensione tangenziale media palo-terreno in [kg/cm ²]
σ_p	tensione sul terreno alla punta del palo in [kg/cm ²]
N_c, N_q, N_γ	fattori di capacità portante
N'_c, N'_q, N'_γ	fattori di capacità portante corretti
P_1	portanza caratteristica per attrito e aderenza laterale in [kg]
P_p	portanza caratteristica di punta in [kg]
P_d	portanza di progetto, in [kg]
W_p	peso del palo, in [kg]
T_d	portanza trasversale di progetto, espresso in [kg]
PT	Parametri Terreno utilizzati

Fila	N_c	N'_c	N_q	N'_q	N_γ	N'_γ	τ_m	σ_p
1	23.36	23.36	11.40	11.40	6.91	6.91	-0.08	1.89
2	23.36	23.36	11.40	11.40	6.91	6.91	-0.02	6.90

Fila	P_1	P_p	W_p	P_d	PT
1	7156	77070	11310	51504	MEDI
1	7156	77070	11310	51504	MINIMI
2	7156	77070	11310	52001	MEDI
2	7156	77070	11310	52001	MINIMI

Verifica della portanza

N	carico verticale in testa al palo in [kg]
P_d	portanza di progetto in [kg]
FS_v	fattori di sicurezza a carichi verticali (rapporto tra P_d/N)
T	carico orizzontale in testa al palo in [kg]
T_d	portanza trasversale di progetto in [kg]
FS_o	fattori di sicurezza a carichi orizzontali (rapporto tra T_d/T)

Fila	N	P_d	FS_v	T	T_d	FS_o
1	-7783	51504	6.618	11417	28607	2.506
2	29203	52001	1.781	11417	28607	2.506

Verifica a punzonamento della fondazione

D	diametro dei pali della fila espresso in [cm]
H _f	altezza della fondazione in corrispondenza della fila espressa in [cm]
S _i	superficie di aderenza palo-fondazione (H _f l ₁ D) espressa in [cmq]
N	sforzo normale trasmesso dal palo alla fondazione espresso in [kg]
τ _c	tensione tangenziale palo-fondazione espressa in [kg/cmq]

Fila	D	H _f	S _i	N	τ _c
1	80.0	40.0	10053.1	-7783	-0.77
2	80.0	40.0	10053.1	29203	2.90

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 1

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
M _u	momento ultimo espresso in [kgm]
N _u	sforzo normale ultimo espresso in [kg]
T _u	taglio ultimo espresso in [kg]
CS	coefficiente di sicurezza

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	-7783	11417	52.28	0	-208559	55705	4.88
2	0.23	-2569	-7492	11350	52.28	33858	-98749	55705	4.91
3	0.45	-5123	-7187	11288	52.28	44889	-62975	55705	4.94
4	0.68	-7662	-6866	11230	52.28	50385	-45147	55705	4.96
5	0.90	-10189	-6527	9228	52.28	53699	-34399	55705	5.27
6	1.13	-12265	-6172	7406	52.28	55669	-28012	55705	4.54
7	1.35	-13932	-5800	5758	52.28	56990	-23726	55705	4.09
8	1.57	-15227	-5412	4277	52.28	57955	-20597	55705	3.81
9	1.80	-16190	-5007	2953	52.28	58707	-18157	55705	3.63
10	2.02	-16854	-4586	1779	52.28	59328	-16144	55705	3.52
11	2.25	-17254	-4149	744	52.28	59867	-14395	55705	3.47
12	2.48	-17422	-3695	-161	52.28	60359	-12802	55705	3.46
13	2.70	-17385	-3225	-944	52.28	60827	-11282	55705	3.50
14	2.93	-17173	-2738	-1617	52.28	61293	-9773	55705	3.57
15	3.15	-16809	-2235	-2187	52.28	61773	-8214	55705	3.67
16	3.38	-16317	-1716	-2666	52.28	62287	-6549	55705	3.82
17	3.60	-15717	-1180	-3060	52.28	62851	-4717	55705	4.00
18	3.83	-15029	-627	-3380	52.28	63489	-2650	55705	4.22
19	4.05	-14268	-59	-3633	52.28	64225	-264	55705	4.50
20	4.28	-13451	527	-3827	52.28	64872	2540	55705	4.82
21	4.50	-12590	1128	-3970	52.28	65617	5880	55705	5.21
22	4.73	-11697	1746	-4068	52.28	66520	9930	55705	5.69
23	4.95	-10781	2380	-4128	52.28	67635	14933	55705	6.27
24	5.17	-9853	3031	-4156	52.28	69042	21241	55705	7.01
25	5.40	-8918	3698	-4157	52.28	70858	29387	55705	7.95
26	5.63	-7982	4382	-4136	52.28	73275	40226	55705	9.18
27	5.85	-7052	5082	-4098	52.28	76437	55088	55705	10.84
28	6.08	-6130	5799	-4046	52.28	80370	76030	55705	13.11
29	6.30	-5219	6131	-3770	52.28	84335	99061	55705	14.78
30	6.53	-4371	6413	-3460	52.28	88915	130459	55705	16.10
31	6.75	-3592	6696	-3129	52.28	94668	176455	55705	17.80
32	6.98	-2888	6979	-2785	52.28	99971	241550	55705	20.00
33	7.20	-2262	7262	-2435	52.28	102179	328057	55705	22.88
34	7.42	-1714	7544	-2084	52.28	97159	427669	55705	26.73
35	7.65	-1245	7827	-1738	52.28	85262	536022	55705	32.06
36	7.88	-854	8110	-1398	52.28	68273	648311	55705	39.84
37	8.10	-539	8393	-1068	52.28	48024	747112	55705	52.17
38	8.33	-299	8675	-748	52.28	26627	771995	55705	74.48
39	8.55	-131	8958	-439	52.28	11411	780646	55705	87.14
40	8.78	-32	9241	-143	52.28	2727	785583	55705	85.01
41	9.00	0	9524	-143	52.28	0	787133	55705	82.65

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	29203	11417	52.28	0	787133	55705	4.88
2	0.23	-2569	29479	11350	52.28	60197	690784	55705	4.91

3	0.45	-5123	29739	11288	52.28	88210	512106	55705	4.94
4	0.68	-7662	29985	11230	52.28	100069	391599	55705	4.96
5	0.90	-10189	30213	9228	52.28	102132	302844	55705	6.04
6	1.13	-12265	30425	7406	52.28	100363	248954	55705	7.52
7	1.35	-13932	30621	5758	52.28	98256	215957	55705	7.05
8	1.57	-15227	30801	4277	52.28	96451	195092	55705	6.33
9	1.80	-16190	30964	2953	52.28	95230	182138	55705	5.88
10	2.02	-16854	31112	1779	52.28	94418	174293	55705	5.60
11	2.25	-17254	31244	744	52.28	93934	170095	55705	5.44
12	2.48	-17422	31360	-161	52.28	93787	168821	55705	5.38
13	2.70	-17385	31460	-944	52.28	93916	169945	55705	5.40
14	2.93	-17173	31543	-1617	52.28	94291	173194	55705	5.49
15	3.15	-16809	31611	-2187	52.28	94881	178431	55705	5.64
16	3.38	-16317	31663	-2666	52.28	95536	185386	55705	5.85
17	3.60	-15717	31699	-3060	52.28	96384	194388	55705	6.13
18	3.83	-15029	31718	-3380	52.28	97408	205581	55705	6.48
19	4.05	-14268	31722	-3633	52.28	98504	218999	55705	6.90
20	4.28	-13451	31710	-3827	52.28	99616	234837	55705	7.41
21	4.50	-12590	31681	-3970	52.28	100582	253106	55705	7.99
22	4.73	-11697	31637	-4068	52.28	101434	274355	55705	8.67
23	4.95	-10781	31577	-4128	52.28	102047	298873	55705	9.47
24	5.17	-9853	31500	-4156	52.28	102179	326675	55705	10.37
25	5.40	-8918	31408	-4157	52.28	101646	357991	55705	11.40
26	5.63	-7982	31299	-4136	52.28	100027	392210	55705	12.53
27	5.85	-7052	31175	-4098	52.28	97040	429000	55705	13.59
28	6.08	-6130	31034	-4046	52.28	92896	470330	55705	13.77
29	6.30	-5219	31269	-3770	52.28	87055	521558	55705	14.78
30	6.53	-4371	31552	-3460	52.28	79812	576114	55705	16.10
31	6.75	-3592	31835	-3129	52.28	71242	631320	55705	17.80
32	6.98	-2888	32117	-2785	52.28	61532	684211	55705	20.00
33	7.20	-2262	32400	-2435	52.28	51183	733212	55705	22.63
34	7.42	-1714	32683	-2084	52.28	40083	764345	55705	23.39
35	7.65	-1245	32965	-1738	52.28	29103	770588	55705	23.38
36	7.88	-854	33248	-1398	52.28	19928	775804	55705	23.33
37	8.10	-539	33531	-1068	52.28	12549	779999	55705	23.26
38	8.33	-299	33814	-748	52.28	6931	783193	55705	23.16
39	8.55	-131	34096	-439	52.28	3016	785419	55705	23.04
40	8.78	-32	34379	-143	52.28	734	786716	55705	22.88
41	9.00	0	34662	-143	52.28	0	787133	55705	22.71

COMBINAZIONE n° 2

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		

Incremento sismico della spinta	4012.63	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	25.24	[°]		

Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	-551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	-539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	11633.71	[kg]		
Risultante dei carichi applicati in dir. verticale	9546.26	[kg]		
Sforzo normale sul piano di posa della fondazione	9546.26	[kg]		
Sforzo tangenziale sul piano di posa della fondazione	11633.71	[kg]		
Eccentricità rispetto al baricentro della fondazione	1.13	[m]		
Lunghezza fondazione reagente	-0.53	[m]		
Risultante in fondazione	15049.07	[kg]		
Inclinazione della risultante (rispetto alla normale)	50.63	[°]		
Momento rispetto al baricentro della fondazione	10747.12	[kgm]		

Sollecitazioni paramento

Combinazione n° 2

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	12.68	207.50
3	0.25	191.59	51.79	427.99
4	0.38	290.45	118.96	661.48
5	0.50	391.36	215.81	908.31
6	0.63	494.32	344.70	1184.65
7	0.75	599.32	510.66	1505.88
8	0.88	706.36	718.21	1852.52
9	1.00	815.45	969.96	2218.32
10	1.13	926.58	1268.19	2602.05
11	1.25	1039.77	1615.10	3002.78
12	1.38	1154.99	2012.75	3419.81
13	1.50	1272.26	2463.13	3852.57
14	1.63	1391.58	2968.18	4300.63
15	1.75	1512.94	3529.78	4763.61
16	1.88	1636.35	4149.77	5241.24
17	2.00	1761.80	4829.96	5733.27
18	2.13	1889.30	5572.12	6239.52
19	2.25	2018.84	6378.03	6759.82
20	2.38	2150.43	7249.42	7294.03
21	2.50	2284.06	8187.94	7839.93

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 2

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-20.74	3.81	-1534.83	2976.97
2	0.07	-170.88	292.58	0.00	2930.16
3	0.13	-147.81	476.45	0.00	3927.74
4	0.20	0.00	741.60	0.00	6706.65
5	0.27	0.00	1052.53	0.00	9492.91
6	0.33	0.00	1382.91	0.00	12412.03
7	0.40	0.00	1836.33	0.00	15581.49
8	0.46	0.00	2689.89	-173.74	18863.72
9	0.52	0.00	3749.26	-1298.44	22478.26
10	0.57	0.00	5049.87	-3443.29	26403.12
11	0.63	0.00	6628.04	-3485.43	29281.24
12	1.06	-5071.17	0.00	-14594.90	0.00
13	1.10	-4494.08	0.00	-14363.47	0.00
14	1.17	-3619.48	0.00	-12673.86	0.00
15	1.23	-2880.05	0.00	-11012.41	0.00
16	1.30	-2249.61	0.00	-9521.92	0.00
17	1.37	-1792.15	0.00	-8267.32	0.00
18	1.43	-1420.47	0.00	-7092.69	0.00
19	1.50	-1084.69	0.00	-5977.95	0.00
20	1.57	-789.85	0.00	-4905.92	0.00
21	1.63	-539.29	0.00	-3861.23	0.00
22	1.70	-334.88	0.00	-2827.83	0.00
23	1.77	-177.14	12.26	-1944.67	0.00
24	1.83	-65.47	43.40	-1144.89	0.00
25	1.90	0.00	8.00	-574.85	169.49

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-1244.00	0.00	-1376.43	496.42
2	0.13	-1162.05	0.00	-4203.38	2890.14
3	0.27	-849.10	0.00	-6886.11	6037.13
4	0.40	-165.55	44.75	-6962.46	8158.98
5	0.50	-10.53	442.34	-6988.79	5621.46
6	0.63	0.00	842.59	-5222.82	3272.91
7	0.77	0.00	1021.19	-3066.51	1565.84
8	0.90	0.00	1063.63	-1018.04	1018.04
9	1.03	0.00	1021.19	-1565.84	3066.51
10	1.17	0.00	842.59	-3272.91	5222.82
11	1.30	-10.53	442.34	-5621.46	6988.79
12	1.40	-165.55	44.75	-8158.98	6962.46
13	1.53	-849.10	0.00	-6037.13	6886.11
14	1.67	-1162.05	0.00	-2890.14	4203.38
15	1.80	-1244.00	0.00	-1376.43	1376.43
16	1.93	-1162.05	0.00	-4203.38	2890.14
17	2.07	-849.10	0.00	-6886.11	6037.13
18	2.20	-165.55	44.75	-6962.46	8158.98
19	2.30	-10.53	442.34	-6988.79	5621.46
20	2.43	0.00	842.59	-5222.82	3272.91
21	2.57	0.00	1021.19	-3066.51	1565.84
22	2.70	0.00	1063.63	-1018.04	1018.04
23	2.83	0.00	1021.19	-1565.84	3066.51
24	2.97	0.00	842.59	-3272.91	5222.82
25	3.10	-10.53	442.34	-5621.46	6988.79
26	3.20	-165.55	44.75	-8158.98	6962.46
27	3.33	-849.10	0.00	-6037.13	6886.11
28	3.47	-1162.05	0.00	-2890.14	4203.38
29	3.60	-1244.00	0.00	-1376.43	1376.43
30	3.73	-1162.05	0.00	-4203.38	2890.14
31	3.87	-849.10	0.00	-6886.11	6037.13
32	4.00	-165.55	44.75	-6962.46	8158.98
33	4.10	-10.53	442.34	-6988.79	5621.46

34	4.23	0.00	842.59	-5222.82	3272.91
35	4.37	0.00	1021.19	-3066.51	1565.84
36	4.50	0.00	1063.63	-1018.04	1018.04
37	4.63	0.00	1021.19	-1565.84	3066.51
38	4.77	0.00	842.59	-3272.91	5222.82
39	4.90	-10.53	442.34	-5621.46	6988.79
40	5.00	-165.55	44.75	-8158.98	6962.46
41	5.13	-849.10	0.00	-6037.13	6886.11
42	5.27	-1162.05	0.00	-2890.14	4203.38
43	5.40	-1244.00	0.00	-1376.43	1376.43
44	5.53	-1162.05	0.00	-4203.38	2890.14
45	5.67	-849.10	0.00	-6886.11	6037.13
46	5.80	-165.55	44.75	-6962.46	8158.98
47	5.90	-10.53	442.34	-6988.79	5621.46
48	6.03	0.00	842.59	-5222.82	3272.91
49	6.17	0.00	1021.19	-3066.51	1565.84
50	6.30	0.00	1063.63	-1018.04	1018.04
51	6.43	0.00	1021.19	-1565.84	3066.51
52	6.57	0.00	842.59	-3272.91	5222.82
53	6.70	-10.53	442.34	-5621.46	6988.79
54	6.80	-165.55	44.75	-8158.98	6962.46
55	6.93	-849.10	0.00	-6037.13	6886.11
56	7.07	-1162.05	0.00	-2890.14	4203.38
57	7.20	-1244.00	0.00	-1376.43	1376.43
58	7.33	-1162.05	0.00	-4203.38	2890.14
59	7.47	-849.10	0.00	-6886.11	6037.13
60	7.60	-165.55	44.75	-6962.46	8158.98
61	7.70	-10.53	442.34	-6988.79	5621.46
62	7.83	0.00	842.59	-5222.82	3272.91
63	7.97	0.00	1021.19	-3066.51	1565.84
64	8.10	0.00	1063.63	-1018.04	1018.04
65	8.23	0.00	1021.19	-1565.84	3066.51
66	8.37	0.00	842.59	-3272.91	5222.82
67	8.50	-10.53	442.34	-5621.46	6988.79
68	8.60	-165.55	44.75	-8158.98	6962.46
69	8.73	-849.10	0.00	-6037.13	6886.11
70	8.87	-1162.05	0.00	-2890.14	4203.38
71	9.00	-1244.00	0.00	-1376.43	1376.43
72	9.13	-1162.05	0.00	-4203.38	2890.14
73	9.27	-849.10	0.00	-6886.11	6037.13
74	9.40	-165.55	44.75	-6962.46	8158.98
75	9.50	-10.53	442.34	-6988.79	5621.46
76	9.63	0.00	842.59	-5222.82	3272.91
77	9.77	0.00	1021.19	-3066.51	1565.84
78	9.90	0.00	1063.63	-1018.04	1018.04
79	10.03	0.00	1021.19	-1565.84	3066.51
80	10.17	0.00	842.59	-3272.91	5222.82
81	10.30	-10.53	442.34	-5621.46	6988.79
82	10.40	-165.55	44.75	-8158.98	6962.46
83	10.53	-849.10	0.00	-6037.13	6886.11
84	10.67	-1162.05	0.00	-2890.14	4203.38
85	10.80	-1244.00	0.00	-1376.43	1376.43
86	10.93	-1162.05	0.00	-4203.38	2890.14
87	11.07	-849.10	0.00	-6886.11	6037.13
88	11.20	-165.55	44.75	-6962.46	8158.98
89	11.30	-10.53	442.34	-6988.79	5621.46
90	11.43	0.00	842.59	-5222.82	3272.91
91	11.57	0.00	1021.19	-3066.51	1565.84
92	11.70	0.00	1063.63	-1018.04	1018.04
93	11.83	0.00	1021.19	-1565.84	3066.51
94	11.97	0.00	842.59	-3272.91	5222.82
95	12.10	-10.53	442.34	-5621.46	6988.79
96	12.20	-165.55	44.75	-8158.98	6962.46
97	12.33	-849.10	0.00	-6037.13	6886.11
98	12.47	-1162.05	0.00	-2890.14	4203.38
99	12.60	-1244.00	0.00	-1376.43	1376.43
100	12.73	-1162.05	0.00	-4203.38	2890.14
101	12.87	-849.10	0.00	-6886.11	6037.13
102	13.00	-165.55	44.75	-6962.46	8158.98
103	13.10	-10.53	442.34	-6988.79	5621.46
104	13.23	0.00	842.59	-5222.82	3272.91
105	13.37	0.00	1021.19	-3066.51	1565.84
106	13.50	0.00	1063.63	-1018.04	1018.04
107	13.63	0.00	1021.19	-1565.84	3066.51
108	13.77	0.00	842.59	-3272.91	5222.82
109	13.90	-10.53	442.34	-5621.46	6988.79
110	14.00	-165.55	44.75	-8158.98	6962.46

111	14.13	-849.10	0.00	-6037.13	6886.11
112	14.27	-1162.05	0.00	-2890.14	4203.38
113	14.40	-1244.00	0.00	-1376.43	1376.43
114	14.53	-1162.05	0.00	-4203.38	2890.14
115	14.67	-849.10	0.00	-6886.11	6037.13
116	14.80	-165.55	44.75	-6962.46	8158.98
117	14.90	-10.53	442.34	-6988.79	5621.46
118	15.03	0.00	842.59	-5222.82	3272.91
119	15.17	0.00	1021.19	-3066.51	1565.84
120	15.30	0.00	1063.63	-1018.04	1018.04
121	15.43	0.00	1021.19	-1565.84	3066.51
122	15.57	0.00	842.59	-3272.91	5222.82
123	15.70	-10.53	442.34	-5621.46	6988.79
124	15.80	-165.55	44.75	-8158.98	6962.46
125	15.93	-849.10	0.00	-6037.13	6886.11
126	16.07	-1162.05	0.00	-2890.14	4203.38
127	16.20	-1244.00	0.00	-1376.43	1376.43
128	16.33	-1162.05	0.00	-4203.38	2890.14
129	16.47	-849.10	0.00	-6886.11	6037.13
130	16.60	-165.55	44.75	-6962.46	8158.98
131	16.70	-10.53	442.34	-6988.79	5621.46
132	16.83	0.00	842.59	-5222.82	3272.91
133	16.97	0.00	1021.19	-3066.51	1565.84
134	17.10	0.00	1063.63	-1018.04	1018.04
135	17.23	0.00	1021.19	-1565.84	3066.51
136	17.37	0.00	842.59	-3272.91	5222.82
137	17.50	-10.53	442.34	-5621.46	6988.79
138	17.60	-165.55	44.75	-8158.98	6962.46
139	17.73	-849.10	0.00	-6037.13	6886.11
140	17.87	-1162.05	0.00	-2890.14	4203.38
141	18.00	-1244.00	0.00	-1376.43	1376.43
142	18.13	-1162.05	0.00	-4203.38	2890.14
143	18.27	-849.10	0.00	-6886.11	6037.13
144	18.40	-165.55	44.75	-6962.46	8158.98
145	18.50	-10.53	442.34	-6988.79	5621.46
146	18.63	0.00	842.59	-5222.82	3272.91
147	18.77	0.00	1021.19	-3066.51	1565.84
148	18.90	0.00	1063.63	-1018.04	1018.04
149	19.03	0.00	1021.19	-1565.84	3066.51
150	19.17	0.00	842.59	-3272.91	5222.82
151	19.30	-10.53	442.34	-5621.46	6988.79
152	19.40	-165.55	44.75	-8158.98	6962.46
153	19.53	-849.10	0.00	-6037.13	6886.11
154	19.67	-1162.05	0.00	-2890.14	4203.38
155	19.80	-1244.00	0.00	-1376.43	1376.43
156	19.93	-1162.05	0.00	-4203.38	2890.14
157	20.07	-849.10	0.00	-6886.11	6037.13
158	20.20	-165.55	44.75	-6962.46	8158.98
159	20.30	-10.53	442.34	-6988.79	5621.46
160	20.43	0.00	842.59	-5222.82	3272.91
161	20.57	0.00	1021.19	-3066.51	1565.84
162	20.70	0.00	1063.63	-1018.04	1018.04
163	20.83	0.00	1021.19	-1565.84	3066.51
164	20.97	0.00	842.59	-3272.91	5222.82
165	21.10	-10.53	442.34	-5621.46	6988.79
166	21.20	-165.55	44.75	-8158.98	6962.46
167	21.33	-849.10	0.00	-6037.13	6886.11
168	21.47	-1162.05	0.00	-2890.14	4203.38
169	21.60	-1244.00	0.00	-1376.43	1376.43
170	21.73	-1162.05	0.00	-4203.38	2890.14
171	21.87	-849.10	0.00	-6886.11	6037.13
172	22.00	-165.55	44.75	-6962.46	8158.98
173	22.10	-10.53	442.34	-6988.79	5621.46
174	22.23	0.00	842.59	-5222.82	3272.91
175	22.37	0.00	1021.19	-3066.51	1565.84
176	22.50	0.00	1063.63	-1018.04	1018.04
177	22.63	0.00	1021.19	-1565.84	3066.51
178	22.77	0.00	842.59	-3272.91	5222.82
179	22.90	-10.53	442.34	-5621.46	6988.79
180	23.00	-165.56	44.75	-8158.99	6962.46
181	23.13	-849.10	0.00	-6037.12	6886.10
182	23.27	-1162.05	0.00	-2890.13	4203.37
183	23.40	-1244.00	0.00	-1376.43	1376.42
184	23.53	-1162.05	0.00	-4203.39	2890.10
185	23.67	-849.11	0.00	-6886.12	6037.10
186	23.80	-165.56	44.75	-6962.48	8158.98
187	23.90	-10.53	442.33	-6988.81	5621.45

188	24.03	0.00	842.58	-5222.85	3272.89
189	24.17	0.00	1021.18	-3066.54	1565.81
190	24.30	0.00	1063.62	-1018.08	1017.99
191	24.43	0.00	1021.18	-1565.88	3066.45
192	24.57	0.00	842.56	-3272.96	5222.74
193	24.70	-10.52	442.31	-5621.54	6988.69
194	24.80	-165.58	44.75	-8159.18	6962.36
195	24.93	-849.15	0.00	-6036.92	6885.98
196	25.07	-1162.11	0.00	-2889.92	4203.21
197	25.20	-1244.07	0.00	-1376.71	1376.21
198	25.33	-1162.15	0.00	-4203.74	2889.07
199	25.47	-849.23	0.00	-6886.58	6036.17
200	25.60	-165.69	44.75	-6963.02	8159.03
201	25.70	-10.52	442.13	-6989.35	5621.05
202	25.83	0.00	842.32	-5223.52	3272.38
203	25.97	0.00	1020.86	-3067.41	1565.19
204	26.10	0.00	1063.22	-1019.20	1016.53
205	26.23	0.00	1020.66	-1567.18	3064.58
206	26.37	0.00	841.89	-3274.51	5220.31
207	26.50	-10.50	441.42	-5623.71	6985.71
208	26.60	-166.47	44.74	-8165.21	6959.39
209	26.73	-850.55	0.00	-6030.72	6882.05
210	26.87	-1163.91	0.00	-2883.54	4198.15
211	27.00	-1246.39	0.00	-1385.06	1369.71
212	27.13	-1164.98	0.00	-4214.48	2857.57
213	27.27	-852.92	0.00	-6900.64	6007.97
214	27.40	-169.70	44.71	-6979.39	8160.71
215	27.50	-10.49	435.93	-7005.76	5608.89
216	27.63	0.00	834.60	-5243.88	3256.71
217	27.77	0.00	1010.96	-3093.78	1831.00
218	27.90	0.00	1051.11	-1053.21	972.81
219	28.03	0.00	1005.00	-1607.98	3009.27
220	28.17	0.00	821.36	-3324.14	5149.01
221	28.30	-9.82	413.84	-5695.30	6898.89
222	28.40	-193.93	45.17	-8365.92	6872.84
223	28.53	-895.32	0.00	-5877.73	6768.32
224	28.67	-1222.65	0.00	-2803.39	4052.29
225	28.80	-1324.42	0.00	-1632.69	1588.86
226	28.93	-1264.41	0.00	-4549.07	1856.08
227	29.07	-987.57	0.00	-7361.88	5075.51
228	29.20	-349.99	38.57	-7332.74	8155.05
229	29.33	-183.28	311.36	-7363.11	4663.71
230	29.47	-155.13	567.38	-5695.71	2132.25
231	29.60	-126.42	616.71	-4090.52	565.02
232	29.73	-96.70	547.09	-2992.91	369.81
233	29.87	-70.60	432.80	-2876.61	662.53
234	30.00	-47.24	17.79	-2911.81	627.22

Armature e tensioni nei materiali del muro

Combinazione n° 2

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
VR _{rd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
VR _{sd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
VR _d	Resistenza al taglio, espresso in [kg]

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Red}	V _{Rsd}
1	0.00	100, 30	10.05	8.04	0	0	1000.00	13007	--	--
2	0.13	100, 31	10.05	8.04	188045	-25157	1984.17	13157	--	--
3	0.25	100, 31	10.05	8.04	70620	-19091	368.60	13305	--	--
4	0.38	100, 32	10.05	8.04	38505	-15771	132.57	13453	--	--
5	0.50	100, 33	10.05	8.04	26473	-14598	67.64	13600	--	--
6	0.63	100, 33	14.07	8.04	27765	-19361	56.17	15369	--	--
7	0.75	100, 34	14.07	8.04	22437	-19118	37.44	15529	--	--
8	0.88	100, 35	14.07	8.04	18746	-19060	26.54	15688	--	--
9	1.00	100, 35	14.07	8.04	16072	-19118	19.71	15847	--	--
10	1.13	100, 36	14.07	8.04	14065	-19251	15.18	16004	--	--
11	1.25	100, 37	14.07	8.04	12513	-19436	12.03	16161	--	--

12	1.38	100, 37	14.07	8.04	11281	-19659	9.77	16317	--	--
13	1.50	100, 38	14.07	8.04	10283	-19909	8.08	16472	--	--
14	1.63	100, 39	14.07	8.04	9460	-20178	6.80	16627	--	--
15	1.75	100, 39	14.07	8.04	8771	-20464	5.80	16780	--	--
16	1.88	100, 40	14.07	8.04	8187	-20761	5.00	16933	--	--
17	2.00	100, 40	28.15	16.08	14993	-41103	8.51	21463	--	--
18	2.13	100, 41	14.07	8.04	7250	-21384	3.84	17237	--	--
19	2.25	100, 42	14.07	8.04	6870	-21705	3.40	17388	--	--
20	2.38	100, 42	14.07	8.04	6535	-22032	3.04	17539	--	--
21	2.50	100, 43	14.07	8.04	6238	-22363	2.73	17689	--	--

Armature e tensioni nei materiali della fondazione

Combinazione n° 2

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
V _{Rcd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
V _{Rsd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
VRd	Resistenza al taglio, espresso in [kg]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	-11345	546.94	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	38.78	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	23.81	15220	--	--
4	0.20	100, 40	8.04	8.04	0	11345	15.30	15220	--	--
5	0.27	100, 40	8.04	8.04	0	11345	10.78	15220	--	--
6	0.33	100, 40	8.04	8.04	0	11345	8.20	98910	118010	98910
7	0.40	100, 40	8.04	8.04	0	11345	6.18	106555	118010	106555
8	0.46	100, 40	8.04	8.04	0	11345	4.22	15220	--	--
9	0.52	100, 40	8.04	8.04	0	11345	3.03	15220	--	--
10	0.57	100, 40	8.04	8.04	0	11345	2.25	15220	--	--
11	0.63	100, 40	8.04	10.05	0	14108	2.13	15220	--	--

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	11345	1000.00	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	173.30	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	64.04	15220	--	--
4	0.20	100, 40	8.04	8.04	0	-11345	33.88	15220	--	--
5	0.27	100, 40	8.04	8.04	0	-11345	21.04	15220	--	--
6	0.33	100, 40	8.04	8.04	0	-11345	14.36	15220	--	--
7	0.40	100, 40	8.04	8.04	0	-11345	10.46	15220	--	--
8	0.47	100, 40	8.04	8.04	0	-11345	7.99	15220	--	--
9	0.53	100, 40	8.04	8.04	0	-11345	6.33	15220	--	--
10	0.60	100, 40	8.04	8.04	0	-11345	5.04	15220	--	--
11	0.67	100, 40	8.04	8.04	0	-11345	3.94	15220	--	--
12	0.73	100, 40	8.04	8.04	0	-11345	3.13	15220	--	--
13	0.80	100, 40	8.04	8.04	0	-11345	2.52	15220	--	--
14	0.84	100, 40	8.04	8.04	0	-11345	2.24	15220	--	--

Armature e tensioni piastre

Combinazione n° 2

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	8.90
2	0.13	2.83	2.83	0	-4090	9.49

3	0.27	2.83	2.83	0	-4090	12.24
4	0.40	2.83	2.83	0	-4090	26.09
5	0.50	2.83	2.83	0	4090	55.35
6	0.63	2.83	2.83	0	4090	12.21
7	0.77	2.83	2.83	0	4090	8.63
8	0.90	2.83	2.83	0	4090	7.93
9	1.03	2.83	2.83	0	4090	8.63
10	1.17	2.83	2.83	0	4090	12.21
11	1.30	2.83	2.83	0	4090	55.35
12	1.40	2.83	2.83	0	-4090	26.09
13	1.53	2.83	2.83	0	-4090	12.24
14	1.67	2.83	2.83	0	-4090	9.49
15	1.80	2.83	2.83	0	-4090	8.90
16	1.93	2.83	2.83	0	-4090	9.49
17	2.07	2.83	2.83	0	-4090	12.24
18	2.20	2.83	2.83	0	-4090	26.09
19	2.30	2.83	2.83	0	4090	55.35
20	2.43	2.83	2.83	0	4090	12.21
21	2.57	2.83	2.83	0	4090	8.63
22	2.70	2.83	2.83	0	4090	7.93
23	2.83	2.83	2.83	0	4090	8.63
24	2.97	2.83	2.83	0	4090	12.21
25	3.10	2.83	2.83	0	4090	55.35
26	3.20	2.83	2.83	0	-4090	26.09
27	3.33	2.83	2.83	0	-4090	12.24
28	3.47	2.83	2.83	0	-4090	9.49
29	3.60	2.83	2.83	0	-4090	8.90
30	3.73	2.83	2.83	0	-4090	9.49
31	3.87	2.83	2.83	0	-4090	12.24
32	4.00	2.83	2.83	0	-4090	26.09
33	4.10	2.83	2.83	0	4090	55.35
34	4.23	2.83	2.83	0	4090	12.21
35	4.37	2.83	2.83	0	4090	8.63
36	4.50	2.83	2.83	0	4090	7.93
37	4.63	2.83	2.83	0	4090	8.63
38	4.77	2.83	2.83	0	4090	12.21
39	4.90	2.83	2.83	0	4090	55.35
40	5.00	2.83	2.83	0	-4090	26.09
41	5.13	2.83	2.83	0	-4090	12.24
42	5.27	2.83	2.83	0	-4090	9.49
43	5.40	2.83	2.83	0	-4090	8.90
44	5.53	2.83	2.83	0	-4090	9.49
45	5.67	2.83	2.83	0	-4090	12.24
46	5.80	2.83	2.83	0	-4090	26.09
47	5.90	2.83	2.83	0	4090	55.35
48	6.03	2.83	2.83	0	4090	12.21
49	6.17	2.83	2.83	0	4090	8.63
50	6.30	2.83	2.83	0	4090	7.93
51	6.43	2.83	2.83	0	4090	8.63
52	6.57	2.83	2.83	0	4090	12.21
53	6.70	2.83	2.83	0	4090	55.35
54	6.80	2.83	2.83	0	-4090	26.09
55	6.93	2.83	2.83	0	-4090	12.24
56	7.07	2.83	2.83	0	-4090	9.49
57	7.20	2.83	2.83	0	-4090	8.90
58	7.33	2.83	2.83	0	-4090	9.49
59	7.47	2.83	2.83	0	-4090	12.24
60	7.60	2.83	2.83	0	-4090	26.09
61	7.70	2.83	2.83	0	4090	55.35
62	7.83	2.83	2.83	0	4090	12.21
63	7.97	2.83	2.83	0	4090	8.63
64	8.10	2.83	2.83	0	4090	7.93
65	8.23	2.83	2.83	0	4090	8.63
66	8.37	2.83	2.83	0	4090	12.21
67	8.50	2.83	2.83	0	4090	55.35
68	8.60	2.83	2.83	0	-4090	26.09
69	8.73	2.83	2.83	0	-4090	12.24
70	8.87	2.83	2.83	0	-4090	9.49
71	9.00	2.83	2.83	0	-4090	8.90
72	9.13	2.83	2.83	0	-4090	9.49
73	9.27	2.83	2.83	0	-4090	12.24
74	9.40	2.83	2.83	0	-4090	26.09
75	9.50	2.83	2.83	0	4090	55.35
76	9.63	2.83	2.83	0	4090	12.21
77	9.77	2.83	2.83	0	4090	8.63
78	9.90	2.83	2.83	0	4090	7.93
79	10.03	2.83	2.83	0	4090	8.63

80	10.17	2.83	2.83	0	4090	12.21
81	10.30	2.83	2.83	0	4090	55.35
82	10.40	2.83	2.83	0	-4090	26.09
83	10.53	2.83	2.83	0	-4090	12.24
84	10.67	2.83	2.83	0	-4090	9.49
85	10.80	2.83	2.83	0	-4090	8.90
86	10.93	2.83	2.83	0	-4090	9.49
87	11.07	2.83	2.83	0	-4090	12.24
88	11.20	2.83	2.83	0	-4090	26.09
89	11.30	2.83	2.83	0	4090	55.35
90	11.43	2.83	2.83	0	4090	12.21
91	11.57	2.83	2.83	0	4090	8.63
92	11.70	2.83	2.83	0	4090	7.93
93	11.83	2.83	2.83	0	4090	8.63
94	11.97	2.83	2.83	0	4090	12.21
95	12.10	2.83	2.83	0	4090	55.35
96	12.20	2.83	2.83	0	-4090	26.09
97	12.33	2.83	2.83	0	-4090	12.24
98	12.47	2.83	2.83	0	-4090	9.49
99	12.60	2.83	2.83	0	-4090	8.90
100	12.73	2.83	2.83	0	-4090	9.49
101	12.87	2.83	2.83	0	-4090	12.24
102	13.00	2.83	2.83	0	-4090	26.09
103	13.10	2.83	2.83	0	4090	55.35
104	13.23	2.83	2.83	0	4090	12.21
105	13.37	2.83	2.83	0	4090	8.63
106	13.50	2.83	2.83	0	4090	7.93
107	13.63	2.83	2.83	0	4090	8.63
108	13.77	2.83	2.83	0	4090	12.21
109	13.90	2.83	2.83	0	4090	55.35
110	14.00	2.83	2.83	0	-4090	26.09
111	14.13	2.83	2.83	0	-4090	12.24
112	14.27	2.83	2.83	0	-4090	9.49
113	14.40	2.83	2.83	0	-4090	8.90
114	14.53	2.83	2.83	0	-4090	9.49
115	14.67	2.83	2.83	0	-4090	12.24
116	14.80	2.83	2.83	0	-4090	26.09
117	14.90	2.83	2.83	0	4090	55.35
118	15.03	2.83	2.83	0	4090	12.21
119	15.17	2.83	2.83	0	4090	8.63
120	15.30	2.83	2.83	0	4090	7.93
121	15.43	2.83	2.83	0	4090	8.63
122	15.57	2.83	2.83	0	4090	12.21
123	15.70	2.83	2.83	0	4090	55.35
124	15.80	2.83	2.83	0	-4090	26.09
125	15.93	2.83	2.83	0	-4090	12.24
126	16.07	2.83	2.83	0	-4090	9.49
127	16.20	2.83	2.83	0	-4090	8.90
128	16.33	2.83	2.83	0	-4090	9.49
129	16.47	2.83	2.83	0	-4090	12.24
130	16.60	2.83	2.83	0	-4090	26.09
131	16.70	2.83	2.83	0	4090	55.35
132	16.83	2.83	2.83	0	4090	12.21
133	16.97	2.83	2.83	0	4090	8.63
134	17.10	2.83	2.83	0	4090	7.93
135	17.23	2.83	2.83	0	4090	8.63
136	17.37	2.83	2.83	0	4090	12.21
137	17.50	2.83	2.83	0	4090	55.35
138	17.60	2.83	2.83	0	-4090	26.09
139	17.73	2.83	2.83	0	-4090	12.24
140	17.87	2.83	2.83	0	-4090	9.49
141	18.00	2.83	2.83	0	-4090	8.90
142	18.13	2.83	2.83	0	-4090	9.49
143	18.27	2.83	2.83	0	-4090	12.24
144	18.40	2.83	2.83	0	-4090	26.09
145	18.50	2.83	2.83	0	4090	55.35
146	18.63	2.83	2.83	0	4090	12.21
147	18.77	2.83	2.83	0	4090	8.63
148	18.90	2.83	2.83	0	4090	7.93
149	19.03	2.83	2.83	0	4090	8.63
150	19.17	2.83	2.83	0	4090	12.21
151	19.30	2.83	2.83	0	4090	55.35
152	19.40	2.83	2.83	0	-4090	26.09
153	19.53	2.83	2.83	0	-4090	12.24
154	19.67	2.83	2.83	0	-4090	9.49
155	19.80	2.83	2.83	0	-4090	8.90
156	19.93	2.83	2.83	0	-4090	9.49

157	20.07	2.83	2.83	0	-4090	12.24
158	20.20	2.83	2.83	0	-4090	26.09
159	20.30	2.83	2.83	0	4090	55.35
160	20.43	2.83	2.83	0	4090	12.21
161	20.57	2.83	2.83	0	4090	8.63
162	20.70	2.83	2.83	0	4090	7.93
163	20.83	2.83	2.83	0	4090	8.63
164	20.97	2.83	2.83	0	4090	12.21
165	21.10	2.83	2.83	0	4090	55.35
166	21.20	2.83	2.83	0	-4090	26.09
167	21.33	2.83	2.83	0	-4090	12.24
168	21.47	2.83	2.83	0	-4090	9.49
169	21.60	2.83	2.83	0	-4090	8.90
170	21.73	2.83	2.83	0	-4090	9.49
171	21.87	2.83	2.83	0	-4090	12.24
172	22.00	2.83	2.83	0	-4090	26.09
173	22.10	2.83	2.83	0	4090	55.34
174	22.23	2.83	2.83	0	4090	12.21
175	22.37	2.83	2.83	0	4090	8.63
176	22.50	2.83	2.83	0	4090	7.93
177	22.63	2.83	2.83	0	4090	8.63
178	22.77	2.83	2.83	0	4090	12.21
179	22.90	2.83	2.83	0	4090	55.30
180	23.00	2.83	2.83	0	-4090	26.11
181	23.13	2.83	2.83	0	-4090	12.25
182	23.27	2.83	2.83	0	-4090	9.49
183	23.40	2.83	2.83	0	-4090	8.90
184	23.53	2.83	2.83	0	-4090	9.49
185	23.67	2.83	2.83	0	-4090	12.25
186	23.80	2.83	2.83	0	-4090	26.14
187	23.90	2.83	2.83	0	4090	55.14
188	24.03	2.83	2.83	0	4090	12.20
189	24.17	2.83	2.83	0	4090	8.62
190	24.30	2.83	2.83	0	4090	7.92
191	24.43	2.83	2.83	0	4090	8.62
192	24.57	2.83	2.83	0	4090	12.18
193	24.70	2.83	2.83	0	4090	54.69
194	24.80	2.83	2.83	0	-4090	26.30
195	24.93	2.83	2.83	0	-4090	12.30
196	25.07	2.83	2.83	0	-4090	9.53
197	25.20	2.83	2.83	0	-4090	8.94
198	25.33	2.83	2.83	0	-4090	9.54
199	25.47	2.83	2.83	0	-4090	12.36
200	25.60	2.83	2.83	0	-4090	26.73
201	25.70	2.83	2.83	0	4090	52.70
202	25.83	2.83	2.83	0	4090	12.03
203	25.97	2.83	2.83	0	4090	8.52
204	26.10	2.83	2.83	0	4090	7.81
205	26.23	2.83	2.83	0	4090	8.47
206	26.37	2.83	2.83	0	4090	11.83
207	26.50	2.83	2.83	0	4090	47.68
208	26.60	2.83	2.83	0	-4090	29.08
209	26.73	2.83	2.83	0	-4090	12.99
210	26.87	2.83	2.83	0	-4090	10.02
211	27.00	2.83	2.83	0	-4090	9.46
212	27.13	2.83	2.83	0	-4090	10.28
213	27.27	2.83	2.83	0	-4090	13.95
214	27.40	2.83	2.83	0	-4090	38.71
215	27.50	2.83	2.83	0	4090	31.77
216	27.63	2.83	2.83	0	4090	10.06
217	27.77	2.83	2.83	0	4090	7.30
218	27.90	2.83	2.83	0	4090	6.59
219	28.03	2.83	2.83	0	4090	6.85
220	28.17	2.83	2.83	0	4090	8.48
221	28.30	2.83	2.83	0	4090	16.92
222	28.40	2.83	2.83	0	-4090	90.55
223	28.53	2.83	2.83	0	-4090	33.36
224	28.67	2.83	2.83	0	-4090	19.58
225	28.80	2.83	2.83	0	-4090	16.77
226	28.93	2.83	2.83	0	-4090	16.52
227	29.07	2.83	2.83	0	-4090	17.53
228	29.20	2.83	2.83	0	-4090	19.49
229	29.33	2.83	2.83	0	-4090	22.31
230	29.47	2.83	2.83	0	-4090	26.36
231	29.60	2.83	2.83	0	4090	32.35
232	29.73	2.83	2.83	0	-4090	42.30
233	29.87	2.83	2.83	0	4090	57.93

234	30.00	2.83	2.83	0	4090	229.86
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Piastra fondazione valle

Nr.	X	A _R	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	3.29
2	0.13	2.83	2.83	0	-4090	3.52
3	0.27	2.83	2.83	0	-4090	4.82
4	0.40	2.83	2.83	0	-4090	24.70
5	0.50	2.83	2.83	0	4090	9.25
6	0.63	2.83	2.83	0	4090	4.85
7	0.77	2.83	2.83	0	4090	4.00
8	0.90	2.83	2.83	0	4090	3.85
9	1.03	2.83	2.83	0	4090	4.00
10	1.17	2.83	2.83	0	4090	4.85
11	1.30	2.83	2.83	0	4090	9.25
12	1.40	2.83	2.83	0	-4090	24.70
13	1.53	2.83	2.83	0	-4090	4.82
14	1.67	2.83	2.83	0	-4090	3.52
15	1.80	2.83	2.83	0	-4090	3.29
16	1.93	2.83	2.83	0	-4090	3.52
17	2.07	2.83	2.83	0	-4090	4.82
18	2.20	2.83	2.83	0	-4090	24.70
19	2.30	2.83	2.83	0	4090	9.25
20	2.43	2.83	2.83	0	4090	4.85
21	2.57	2.83	2.83	0	4090	4.00
22	2.70	2.83	2.83	0	4090	3.85
23	2.83	2.83	2.83	0	4090	4.00
24	2.97	2.83	2.83	0	4090	4.85
25	3.10	2.83	2.83	0	4090	9.25
26	3.20	2.83	2.83	0	-4090	24.70
27	3.33	2.83	2.83	0	-4090	4.82
28	3.47	2.83	2.83	0	-4090	3.52
29	3.60	2.83	2.83	0	-4090	3.29
30	3.73	2.83	2.83	0	-4090	3.52
31	3.87	2.83	2.83	0	-4090	4.82
32	4.00	2.83	2.83	0	-4090	24.70
33	4.10	2.83	2.83	0	4090	9.25
34	4.23	2.83	2.83	0	4090	4.85
35	4.37	2.83	2.83	0	4090	4.00
36	4.50	2.83	2.83	0	4090	3.85
37	4.63	2.83	2.83	0	4090	4.00
38	4.77	2.83	2.83	0	4090	4.85
39	4.90	2.83	2.83	0	4090	9.25
40	5.00	2.83	2.83	0	-4090	24.70
41	5.13	2.83	2.83	0	-4090	4.82
42	5.27	2.83	2.83	0	-4090	3.52
43	5.40	2.83	2.83	0	-4090	3.29
44	5.53	2.83	2.83	0	-4090	3.52
45	5.67	2.83	2.83	0	-4090	4.82
46	5.80	2.83	2.83	0	-4090	24.70
47	5.90	2.83	2.83	0	4090	9.25
48	6.03	2.83	2.83	0	4090	4.85
49	6.17	2.83	2.83	0	4090	4.00
50	6.30	2.83	2.83	0	4090	3.85
51	6.43	2.83	2.83	0	4090	4.00
52	6.57	2.83	2.83	0	4090	4.85
53	6.70	2.83	2.83	0	4090	9.25
54	6.80	2.83	2.83	0	-4090	24.70
55	6.93	2.83	2.83	0	-4090	4.82
56	7.07	2.83	2.83	0	-4090	3.52
57	7.20	2.83	2.83	0	-4090	3.29
58	7.33	2.83	2.83	0	-4090	3.52
59	7.47	2.83	2.83	0	-4090	4.82
60	7.60	2.83	2.83	0	-4090	24.70
61	7.70	2.83	2.83	0	4090	9.25
62	7.83	2.83	2.83	0	4090	4.85
63	7.97	2.83	2.83	0	4090	4.00
64	8.10	2.83	2.83	0	4090	3.85
65	8.23	2.83	2.83	0	4090	4.00
66	8.37	2.83	2.83	0	4090	4.85
67	8.50	2.83	2.83	0	4090	9.25
68	8.60	2.83	2.83	0	-4090	24.70
69	8.73	2.83	2.83	0	-4090	4.82
70	8.87	2.83	2.83	0	-4090	3.52
71	9.00	2.83	2.83	0	-4090	3.29
72	9.13	2.83	2.83	0	-4090	3.52

73	9.27	2.83	2.83	0	-4090	4.82
74	9.40	2.83	2.83	0	-4090	24.70
75	9.50	2.83	2.83	0	4090	9.25
76	9.63	2.83	2.83	0	4090	4.85
77	9.77	2.83	2.83	0	4090	4.00
78	9.90	2.83	2.83	0	4090	3.85
79	10.03	2.83	2.83	0	4090	4.00
80	10.17	2.83	2.83	0	4090	4.85
81	10.30	2.83	2.83	0	4090	9.25
82	10.40	2.83	2.83	0	-4090	24.70
83	10.53	2.83	2.83	0	-4090	4.82
84	10.67	2.83	2.83	0	-4090	3.52
85	10.80	2.83	2.83	0	-4090	3.29
86	10.93	2.83	2.83	0	-4090	3.52
87	11.07	2.83	2.83	0	-4090	4.82
88	11.20	2.83	2.83	0	-4090	24.70
89	11.30	2.83	2.83	0	4090	9.25
90	11.43	2.83	2.83	0	4090	4.85
91	11.57	2.83	2.83	0	4090	4.00
92	11.70	2.83	2.83	0	4090	3.85
93	11.83	2.83	2.83	0	4090	4.00
94	11.97	2.83	2.83	0	4090	4.85
95	12.10	2.83	2.83	0	4090	9.25
96	12.20	2.83	2.83	0	-4090	24.70
97	12.33	2.83	2.83	0	-4090	4.82
98	12.47	2.83	2.83	0	-4090	3.52
99	12.60	2.83	2.83	0	-4090	3.29
100	12.73	2.83	2.83	0	-4090	3.52
101	12.87	2.83	2.83	0	-4090	4.82
102	13.00	2.83	2.83	0	-4090	24.70
103	13.10	2.83	2.83	0	4090	9.25
104	13.23	2.83	2.83	0	4090	4.85
105	13.37	2.83	2.83	0	4090	4.00
106	13.50	2.83	2.83	0	4090	3.85
107	13.63	2.83	2.83	0	4090	4.00
108	13.77	2.83	2.83	0	4090	4.85
109	13.90	2.83	2.83	0	4090	9.25
110	14.00	2.83	2.83	0	-4090	24.70
111	14.13	2.83	2.83	0	-4090	4.82
112	14.27	2.83	2.83	0	-4090	3.52
113	14.40	2.83	2.83	0	-4090	3.29
114	14.53	2.83	2.83	0	-4090	3.52
115	14.67	2.83	2.83	0	-4090	4.82
116	14.80	2.83	2.83	0	-4090	24.70
117	14.90	2.83	2.83	0	4090	9.25
118	15.03	2.83	2.83	0	4090	4.85
119	15.17	2.83	2.83	0	4090	4.00
120	15.30	2.83	2.83	0	4090	3.85
121	15.43	2.83	2.83	0	4090	4.00
122	15.57	2.83	2.83	0	4090	4.85
123	15.70	2.83	2.83	0	4090	9.25
124	15.80	2.83	2.83	0	-4090	24.70
125	15.93	2.83	2.83	0	-4090	4.82
126	16.07	2.83	2.83	0	-4090	3.52
127	16.20	2.83	2.83	0	-4090	3.29
128	16.33	2.83	2.83	0	-4090	3.52
129	16.47	2.83	2.83	0	-4090	4.82
130	16.60	2.83	2.83	0	-4090	24.70
131	16.70	2.83	2.83	0	4090	9.25
132	16.83	2.83	2.83	0	4090	4.85
133	16.97	2.83	2.83	0	4090	4.00
134	17.10	2.83	2.83	0	4090	3.85
135	17.23	2.83	2.83	0	4090	4.00
136	17.37	2.83	2.83	0	4090	4.85
137	17.50	2.83	2.83	0	4090	9.25
138	17.60	2.83	2.83	0	-4090	24.70
139	17.73	2.83	2.83	0	-4090	4.82
140	17.87	2.83	2.83	0	-4090	3.52
141	18.00	2.83	2.83	0	-4090	3.29
142	18.13	2.83	2.83	0	-4090	3.52
143	18.27	2.83	2.83	0	-4090	4.82
144	18.40	2.83	2.83	0	-4090	24.70
145	18.50	2.83	2.83	0	4090	9.25
146	18.63	2.83	2.83	0	4090	4.85
147	18.77	2.83	2.83	0	4090	4.00
148	18.90	2.83	2.83	0	4090	3.85
149	19.03	2.83	2.83	0	4090	4.00

150	19.17	2.83	2.83	0	4090	4.85
151	19.30	2.83	2.83	0	4090	9.25
152	19.40	2.83	2.83	0	-4090	24.70
153	19.53	2.83	2.83	0	-4090	4.82
154	19.67	2.83	2.83	0	-4090	3.52
155	19.80	2.83	2.83	0	-4090	3.29
156	19.93	2.83	2.83	0	-4090	3.52
157	20.07	2.83	2.83	0	-4090	4.82
158	20.20	2.83	2.83	0	-4090	24.70
159	20.30	2.83	2.83	0	4090	9.25
160	20.43	2.83	2.83	0	4090	4.85
161	20.57	2.83	2.83	0	4090	4.00
162	20.70	2.83	2.83	0	4090	3.85
163	20.83	2.83	2.83	0	4090	4.00
164	20.97	2.83	2.83	0	4090	4.85
165	21.10	2.83	2.83	0	4090	9.25
166	21.20	2.83	2.83	0	-4090	24.70
167	21.33	2.83	2.83	0	-4090	4.82
168	21.47	2.83	2.83	0	-4090	3.52
169	21.60	2.83	2.83	0	-4090	3.29
170	21.73	2.83	2.83	0	-4090	3.52
171	21.87	2.83	2.83	0	-4090	4.82
172	22.00	2.83	2.83	0	-4090	24.70
173	22.10	2.83	2.83	0	4090	9.25
174	22.23	2.83	2.83	0	4090	4.85
175	22.37	2.83	2.83	0	4090	4.00
176	22.50	2.83	2.83	0	4090	3.85
177	22.63	2.83	2.83	0	4090	4.00
178	22.77	2.83	2.83	0	4090	4.85
179	22.90	2.83	2.83	0	4090	9.25
180	23.00	2.83	2.83	0	-4090	24.70
181	23.13	2.83	2.83	0	-4090	4.82
182	23.27	2.83	2.83	0	-4090	3.52
183	23.40	2.83	2.83	0	-4090	3.29
184	23.53	2.83	2.83	0	-4090	3.52
185	23.67	2.83	2.83	0	-4090	4.82
186	23.80	2.83	2.83	0	-4090	24.70
187	23.90	2.83	2.83	0	4090	9.25
188	24.03	2.83	2.83	0	4090	4.85
189	24.17	2.83	2.83	0	4090	4.00
190	24.30	2.83	2.83	0	4090	3.85
191	24.43	2.83	2.83	0	4090	4.00
192	24.57	2.83	2.83	0	4090	4.85
193	24.70	2.83	2.83	0	4090	9.25
194	24.80	2.83	2.83	0	-4090	24.70
195	24.93	2.83	2.83	0	-4090	4.82
196	25.07	2.83	2.83	0	-4090	3.52
197	25.20	2.83	2.83	0	-4090	3.29
198	25.33	2.83	2.83	0	-4090	3.52
199	25.47	2.83	2.83	0	-4090	4.82
200	25.60	2.83	2.83	0	-4090	24.68
201	25.70	2.83	2.83	0	4090	9.25
202	25.83	2.83	2.83	0	4090	4.86
203	25.97	2.83	2.83	0	4090	4.01
204	26.10	2.83	2.83	0	4090	3.85
205	26.23	2.83	2.83	0	4090	4.01
206	26.37	2.83	2.83	0	4090	4.86
207	26.50	2.83	2.83	0	4090	9.27
208	26.60	2.83	2.83	0	-4090	24.57
209	26.73	2.83	2.83	0	-4090	4.81
210	26.87	2.83	2.83	0	-4090	3.51
211	27.00	2.83	2.83	0	-4090	3.28
212	27.13	2.83	2.83	0	-4090	3.51
213	27.27	2.83	2.83	0	-4090	4.80
214	27.40	2.83	2.83	0	-4090	24.10
215	27.50	2.83	2.83	0	4090	9.38
216	27.63	2.83	2.83	0	4090	4.90
217	27.77	2.83	2.83	0	4090	4.05
218	27.90	2.83	2.83	0	4090	3.89
219	28.03	2.83	2.83	0	4090	4.07
220	28.17	2.83	2.83	0	4090	4.98
221	28.30	2.83	2.83	0	4090	9.88
222	28.40	2.83	2.83	0	-4090	21.09
223	28.53	2.83	2.83	0	-4090	4.57
224	28.67	2.83	2.83	0	-4090	3.35
225	28.80	2.83	2.83	0	-4090	3.09
226	28.93	2.83	2.83	0	-4090	3.23

227	29.07	2.83	2.83	0	-4090	4.14
228	29.20	2.83	2.83	0	-4090	11.69
229	29.33	2.83	2.83	0	4090	13.14
230	29.47	2.83	2.83	0	4090	7.21
231	29.60	2.83	2.83	0	4090	6.63
232	29.73	2.83	2.83	0	4090	7.48
233	29.87	2.83	2.83	0	4090	9.45
234	30.00	2.83	2.83	0	-4090	86.58

Analisi dei pali

Combinazione n° 2

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	11633.7
Verticale	[kg]	9546.3
Momento	[kgm]	-10747.1

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.37027
Verticale	[cm]	0.00478
Rotazione	[°]	-0.01042

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]	Tr [kg]	Mr [kgm]
1	32	-9378	10739	0	37189	0
2	33	26450	10739	0	37189	0

Dettagli calcolo della portanza

τ_m	tensione tangenziale media palo-terreno in [kg/cm ²]
σ_p	tensione sul terreno alla punta del palo in [kg/cm ²]
N_c, N_q, N_γ	fattori di capacità portante
N'_c, N'_q, N'_γ	fattori di capacità portante corretti
P_i	portanza caratteristica per attrito e aderenza laterale in [kg]
P_p	portanza caratteristica di punta in [kg]
P_d	portanza di progetto, in [kg]
W_p	peso del palo, in [kg]
T_d	portanza trasversale di progetto, espresso in [kg]
PT	Parametri Terreno utilizzati

Fila	N_c	N'_c	N_q	N'_q	N_γ	N'_γ	τ_m	σ_p
1	23.36	23.36	11.40	11.40	6.91	6.91	-0.06	1.04
2	23.36	23.36	11.40	11.40	6.91	6.91	-0.03	6.43

Fila	P_i	P_p	W_p	P_d	PT
1	7156	77070	11310	51504	MEDI
1	7156	77070	11310	51504	MINIMI
2	7156	77070	11310	52001	MEDI
2	7156	77070	11310	52001	MINIMI

Verifica della portanza

N	carico verticale in testa al palo in [kg]
P_d	portanza di progetto in [kg]
FS_v	fattori di sicurezza a carichi verticali (rapporto tra P_d/N)
T	carico orizzontale in testa al palo in [kg]
T_d	portanza trasversale di progetto in [kg]
FS_o	fattori di sicurezza a carichi orizzontali (rapporto tra T_d/T)

Fila	N	P_d	FS_v	T	T_d	FS_o
1	-9378	51504	5.492	10739	28607	2.664
2	26450	52001	1.966	10739	28607	2.664

Verifica a punzonamento della fondazione

D	diámetro dei pali della fila espresso in [cm]
H _f	altezza della fondazione in corrispondenza della fila espressa in [cm]
S _i	superficie di aderenza palo-fondazione (H _f ID) espressa in [cmq]
N	sforzo normale trasmesso dal palo alla fondazione espresso in [kg]
τ _c	tensione tangenziale palo-fondazione espressa in [kg/cmq]

Fila	D	H _f	S _i	N	τ _c
1	80.0	40.0	10053.1	-9378	-0.93
2	80.0	40.0	10053.1	26450	2.63

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 2

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
M _u	momento ultimo espresso in [kgm]
N _u	sforzo normale ultimo espresso in [kg]
T _u	taglio ultimo espresso in [kg]
CS	coefficiente di sicurezza

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	-9378	10739	52.28	0	-208559	55705	5.19
2	0.23	-2416	-9091	10675	52.28	29770	-112007	55705	5.22
3	0.45	-4818	-8795	10617	52.28	41147	-75111	55705	5.25
4	0.68	-7207	-8492	10563	52.28	47169	-55578	55705	5.27
5	0.90	-9584	-8178	8680	52.28	50910	-43445	55705	5.31
6	1.13	-11537	-7856	6966	52.28	53147	-36191	55705	4.61
7	1.35	-13104	-7524	5416	52.28	54633	-31371	55705	4.17
8	1.57	-14323	-7184	4023	52.28	55693	-27934	55705	3.89
9	1.80	-15228	-6834	2778	52.28	56489	-25353	55705	3.71
10	2.02	-15853	-6476	1673	52.28	57112	-23331	55705	3.60
11	2.25	-16229	-6109	700	52.28	57619	-21687	55705	3.55
12	2.48	-16387	-5732	-151	52.28	58045	-20305	55705	3.54
13	2.70	-16353	-5347	-888	52.28	58417	-19100	55705	3.57
14	2.93	-16153	-4952	-1521	52.28	58752	-18013	55705	3.64
15	3.15	-15811	-4549	-2058	52.28	59066	-16994	55705	3.74
16	3.38	-15348	-4136	-2507	52.28	59372	-16001	55705	3.87
17	3.60	-14783	-3715	-2878	52.28	59682	-14997	55705	4.04
18	3.83	-14136	-3285	-3179	52.28	60007	-13943	55705	4.25
19	4.05	-13421	-2845	-3417	52.28	60360	-12796	55705	4.50
20	4.28	-12652	-2397	-3600	52.28	60757	-11510	55705	4.80
21	4.50	-11842	-1939	-3734	52.28	61215	-10025	55705	5.17
22	4.73	-11002	-1473	-3826	52.28	61756	-8268	55705	5.61
23	4.95	-10141	-998	-3883	52.28	62413	-6140	55705	6.15
24	5.17	-9267	-513	-3909	52.28	63226	-3502	55705	6.82
25	5.40	-8388	-20	-3910	52.28	64259	-153	55705	7.66
26	5.63	-7508	482	-3890	52.28	65241	4192	55705	8.69
27	5.85	-6633	994	-3855	52.28	66528	9967	55705	10.03
28	6.08	-5765	1514	-3806	52.28	68305	17937	55705	11.85
29	6.30	-4909	1824	-3546	52.28	70113	26047	55705	14.28
30	6.53	-4111	2106	-3255	52.28	72599	37198	55705	17.11
31	6.75	-3379	2389	-2943	52.28	76212	53889	55705	18.93
32	6.98	-2717	2672	-2619	52.28	80998	79664	55705	21.27
33	7.20	-2127	2955	-2290	52.28	87693	121799	55705	24.32
34	7.42	-1612	3237	-1960	52.28	96288	193369	55705	28.42
35	7.65	-1171	3520	-1634	52.28	102172	307139	55705	34.08
36	7.88	-803	3803	-1315	52.28	95013	449813	55705	42.36
37	8.10	-507	4086	-1004	52.28	75299	606307	55705	55.47
38	8.33	-281	4368	-703	52.28	48110	746737	55705	79.18
39	8.55	-123	4651	-413	52.28	20534	775459	55705	134.78
40	8.78	-30	4934	-134	52.28	4796	784407	55705	158.98
41	9.00	0	5217	-134	52.28	0	787133	55705	150.89

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	26450	10739	52.28	0	787133	55705	5.19
2	0.23	-2416	26726	10675	52.28	61754	683061	55705	5.22

3	0.45	-4818	26988	10617	52.28	89483	501220	55705	5.25
4	0.68	-7207	27236	10563	52.28	100796	380919	55705	5.27
5	0.90	-9584	27468	8680	52.28	101902	292064	55705	6.42
6	1.13	-11537	27685	6966	52.28	99871	239665	55705	8.00
7	1.35	-13104	27887	5416	52.28	97578	207655	55705	7.45
8	1.57	-14323	28073	4023	52.28	95753	187682	55705	6.69
9	1.80	-15228	28245	2778	52.28	94541	175361	55705	6.21
10	2.02	-15853	28402	1673	52.28	93672	167827	55705	5.91
11	2.25	-16229	28544	700	52.28	93227	163972	55705	5.74
12	2.48	-16387	28672	-151	52.28	93104	162905	55705	5.68
13	2.70	-16353	28784	-888	52.28	93246	164131	55705	5.70
14	2.93	-16153	28881	-1521	52.28	93622	167397	55705	5.80
15	3.15	-15811	28963	-2058	52.28	94224	172609	55705	5.96
16	3.38	-15348	29031	-2507	52.28	95000	179699	55705	6.19
17	3.60	-14783	29083	-2878	52.28	95833	188530	55705	6.48
18	3.83	-14136	29121	-3179	52.28	96872	199565	55705	6.85
19	4.05	-13421	29144	-3417	52.28	97999	212811	55705	7.30
20	4.28	-12652	29151	-3600	52.28	99296	228791	55705	7.85
21	4.50	-11842	29144	-3734	52.28	100244	246711	55705	8.47
22	4.73	-11002	29122	-3826	52.28	101175	267813	55705	9.20
23	4.95	-10141	29085	-3883	52.28	101906	292275	55705	10.05
24	5.17	-9267	29033	-3909	52.28	102177	320100	55705	11.03
25	5.40	-8388	28966	-3910	52.28	101807	351571	55705	12.14
26	5.63	-7508	28884	-3890	52.28	100427	386345	55705	13.38
27	5.85	-6633	28787	-3855	52.28	97544	423357	55705	14.45
28	6.08	-5765	28676	-3806	52.28	93471	464893	55705	14.64
29	6.30	-4909	28914	-3546	52.28	87682	516427	55705	15.71
30	6.53	-4111	29196	-3255	52.28	80471	571460	55705	17.11
31	6.75	-3379	29479	-2943	52.28	71902	627289	55705	18.93
32	6.98	-2717	29762	-2619	52.28	62159	680956	55705	21.27
33	7.20	-2127	30045	-2290	52.28	51737	730678	55705	24.32
34	7.42	-1612	30327	-1960	52.28	40614	764043	55705	25.19
35	7.65	-1171	30610	-1634	52.28	29472	770378	55705	25.17
36	7.88	-803	30893	-1315	52.28	20169	775666	55705	25.11
37	8.10	-507	31176	-1004	52.28	12694	779916	55705	25.02
38	8.33	-281	31458	-703	52.28	7007	783150	55705	24.89
39	8.55	-123	31741	-413	52.28	3048	785401	55705	24.74
40	8.78	-30	32024	-134	52.28	741	786712	55705	24.57
41	9.00	0	32306	-134	52.28	0	787133	55705	24.36

COMBINAZIONE n° 3

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	4770.00	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	30.61	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	12368.59	[kg]
Risultante dei carichi applicati in dir. verticale	11911.18	[kg]
Momento ribaltante rispetto allo spigolo a valle	15791.78	[kgm]
Momento stabilizzante rispetto allo spigolo a valle	16002.66	[kgm]
Sforzo normale sul piano di posa della fondazione	11911.18	[kg]
Sforzo tangenziale sul piano di posa della fondazione	12368.59	[kg]
Eccentricità rispetto al baricentro della fondazione	0.93	[m]
Lunghezza fondazione reagente	0.05	[m]
Risultante in fondazione	17171.44	[kg]
Inclinazione della risultante (rispetto alla normale)	46.08	[°]
Momento rispetto al baricentro della fondazione	11110.82	[kgm]

COEFFICIENTI DI SICUREZZA

COMBINAZIONE n° 4

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	4012.63	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	25.24	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	-551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	-539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	11633.71	[kg]		
Risultante dei carichi applicati in dir. verticale	9546.26	[kg]		
Momento ribaltante rispetto allo spigolo a valle	16026.93	[kgm]		
Momento stabilizzante rispetto allo spigolo a valle	14353.63	[kgm]		
Sforzo normale sul piano di posa della fondazione	9546.26	[kg]		
Sforzo tangenziale sul piano di posa della fondazione	11633.71	[kg]		
Eccentricità rispetto al baricentro della fondazione	1.13	[m]		
Lunghezza fondazione reagente	-0.53	[m]		
Risultante in fondazione	15049.07	[kg]		
Inclinazione della risultante (rispetto alla normale)	50.63	[°]		
Momento rispetto al baricentro della fondazione	10747.12	[kgm]		

COEFFICIENTI DI SICUREZZA

Stabilità globale muro + terreno

Combinazione n° 5

Le ascisse X sono considerate positive verso monte

Le ordinate Y sono considerate positive verso l'alto

Origine in testa al muro (spigolo contro terra)

W	peso della striscia espresso in [kg]
α	angolo fra la base della striscia e l'orizzontale espresso in [°] (positivo antiorario)
ϕ	angolo d'attrito del terreno lungo la base della striscia
c	coesione del terreno lungo la base della striscia espressa in [kg/cmq]
b	larghezza della striscia espressa in [m]
u	pressione neutra lungo la base della striscia espressa in [kg/cmq]
Ctn, Ctt	contributo tiranti espresso in [kg]

Metodo di Fellenius

Numero di cerchi analizzati 36

Numero di strisce 25

Cerchio critico

Coordinate del centro X[m]= -2.10 Y[m]= 2.10

Raggio del cerchio R[m]= 14.23

Ascissa a valle del cerchio Xi[m]= -15.58

Ascissa a monte del cerchio Xs[m]= 11.98

Larghezza della striscia dx[m]= 1.10

Coefficiente di sicurezza C= 2.36

Le strisce sono numerate da monte verso valle

Caratteristiche delle strisce

Striscia	W	$\alpha(^{\circ})$	Wsin α	b/cos α	ϕ	c	u	Ctn	Ctt
1	4014.14	73.55	3849.91	3.89	21.04	0.01	0.00	---	---
2	10243.84	61.18	8974.70	2.29	22.00	0.15	0.00	---	---
3	14058.44	52.89	11211.10	1.83	22.00	0.15	0.00	---	---
4	16923.62	46.01	12176.25	1.59	22.00	0.15	0.00	---	---
5	20269.21	39.92	13007.26	1.44	22.56	0.16	0.00	---	---
6	23321.36	34.34	13154.90	1.34	24.00	0.20	0.00	---	---
7	24903.54	29.11	12114.86	1.26	24.00	0.20	0.00	---	---
8	26185.79	24.14	10707.51	1.21	24.00	0.20	0.00	---	---
9	27205.69	19.35	9014.87	1.17	24.00	0.20	0.00	---	---
10	27899.03	14.70	7081.54	1.14	24.00	0.20	0.00	---	---
11	26721.77	10.15	4711.15	1.12	24.00	0.20	0.00	---	---
12	22827.70	5.67	2255.05	1.11	24.00	0.20	0.00	---	---
13	21482.20	1.22	456.93	1.10	24.00	0.20	0.00	---	---
14	21437.47	-3.22	-1205.74	1.10	24.00	0.20	0.00	---	---
15	21193.35	-7.69	-2834.84	1.11	24.00	0.20	0.00	---	---
16	20745.29	-12.20	-4383.09	1.13	24.00	0.20	0.00	---	---
17	20084.53	-16.79	-5800.58	1.15	24.00	0.20	0.00	---	---
18	19197.20	-21.49	-7032.81	1.18	24.00	0.20	0.00	---	---
19	18062.69	-26.35	-8018.02	1.23	24.00	0.20	0.00	---	---
20	16650.71	-31.43	-8682.99	1.29	24.00	0.20	0.00	---	---
21	14917.26	-36.81	-8936.92	1.38	23.68	0.19	0.00	---	---
22	12858.77	-42.59	-8702.71	1.50	22.00	0.15	0.00	---	---
23	10343.88	-48.99	-7805.77	1.68	22.00	0.15	0.00	---	---
24	7117.92	-56.39	-5927.86	1.99	22.00	0.15	0.00	---	---
25	2596.41	-65.83	-2368.74	2.69	21.54	0.08	0.00	---	---

$\Sigma W_i = 451261.83$ [kg]

$\Sigma W_i \sin \alpha_i = 37015.96$ [kg]

$\Sigma W_i \cos \alpha_i \tan \phi_i = 172567.78$ [kg]

$\Sigma c_i b_i / \cos \alpha_i = 58989.14$ [kg]

Stabilità globale muro + terreno

Combinazione n° 6

Le ascisse X sono considerate positive verso monte

Le ordinate Y sono considerate positive verso l'alto

Origine in testa al muro (spigolo contro terra)

W	peso della striscia espresso in [kg]
α	angolo fra la base della striscia e l'orizzontale espresso in [°] (positivo antiorario)
ϕ	angolo d'attrito del terreno lungo la base della striscia
c	coesione del terreno lungo la base della striscia espressa in [kg/cmq]
b	larghezza della striscia espressa in [m]
u	pressione neutra lungo la base della striscia espressa in [kg/cmq]
Ctn, Ctt	contributo tiranti espresso in [kg]

Metodo di Fellenius

Numero di cerchi analizzati 36

Numero di strisce 25

Cerchio critico

Coordinate del centro X[m]= -2.10 Y[m]= 2.10

Raggio del cerchio R[m]= 14.23

Ascissa a valle del cerchio Xi[m]= -15.58

Ascissa a monte del cerchio Xs[m]= 11.98

Larghezza della striscia dx[m]= 1.10

Coefficiente di sicurezza C= 2.13

Le strisce sono numerate da monte verso valle

Caratteristiche delle strisce

Striscia	W	$\alpha(^{\circ})$	Wsin α	b/cos α	ϕ	c	u	Ctn	Ctt
1	4014.14	73.55	3849.91	3.89	21.04	0.01	0.00	---	---
2	10243.84	61.18	8974.70	2.29	22.00	0.15	0.00	---	---
3	14058.44	52.89	11211.10	1.83	22.00	0.15	0.00	---	---
4	16923.62	46.01	12176.25	1.59	22.00	0.15	0.00	---	---
5	20269.21	39.92	13007.26	1.44	22.56	0.16	0.00	---	---
6	23321.36	34.34	13154.90	1.34	24.00	0.20	0.00	---	---
7	24903.54	29.11	12114.86	1.26	24.00	0.20	0.00	---	---
8	26185.79	24.14	10707.51	1.21	24.00	0.20	0.00	---	---
9	27205.69	19.35	9014.87	1.17	24.00	0.20	0.00	---	---
10	27899.03	14.70	7081.54	1.14	24.00	0.20	0.00	---	---
11	26721.77	10.15	4711.15	1.12	24.00	0.20	0.00	---	---
12	22827.70	5.67	2255.05	1.11	24.00	0.20	0.00	---	---
13	21482.20	1.22	456.93	1.10	24.00	0.20	0.00	---	---
14	21437.47	-3.22	-1205.74	1.10	24.00	0.20	0.00	---	---
15	21193.35	-7.69	-2834.84	1.11	24.00	0.20	0.00	---	---
16	20745.29	-12.20	-4383.09	1.13	24.00	0.20	0.00	---	---
17	20084.53	-16.79	-5800.58	1.15	24.00	0.20	0.00	---	---
18	19197.20	-21.49	-7032.81	1.18	24.00	0.20	0.00	---	---
19	18062.69	-26.35	-8018.02	1.23	24.00	0.20	0.00	---	---
20	16650.71	-31.43	-8682.99	1.29	24.00	0.20	0.00	---	---
21	14917.26	-36.81	-8936.92	1.38	23.68	0.19	0.00	---	---
22	12858.77	-42.59	-8702.71	1.50	22.00	0.15	0.00	---	---
23	10343.88	-48.99	-7805.77	1.68	22.00	0.15	0.00	---	---
24	7117.92	-56.39	-5927.86	1.99	22.00	0.15	0.00	---	---
25	2596.41	-65.83	-2368.74	2.69	21.54	0.08	0.00	---	---

$\Sigma W_i = 451261.83$ [kg]

$\Sigma W_i \sin \alpha_i = 37015.96$ [kg]

$\Sigma W_i \cos \alpha_i \tan \phi_i = 172567.78$ [kg]

$\Sigma c_i b_i / \cos \alpha_i = 58989.14$ [kg]

COMBINAZIONE n° 7

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	4012.63	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	25.24	[°]		

Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	-551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	-539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	11633.71	[kg]		
Risultante dei carichi applicati in dir. verticale	9546.26	[kg]		
Sforzo normale sul piano di posa della fondazione	9546.26	[kg]		
Sforzo tangenziale sul piano di posa della fondazione	11633.71	[kg]		
Eccentricità rispetto al baricentro della fondazione	1.13	[m]		
Lunghezza fondazione reagente	-0.53	[m]		
Risultante in fondazione	15049.07	[kg]		
Inclinazione della risultante (rispetto alla normale)	50.63	[°]		
Momento rispetto al baricentro della fondazione	10747.12	[kgm]		

Sollecitazioni paramento

Combinazione n° 7

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	12.68	207.50
3	0.25	191.59	51.79	427.99
4	0.38	290.45	118.96	661.48
5	0.50	391.36	215.81	908.31
6	0.63	494.32	344.70	1184.65
7	0.75	599.32	510.66	1505.88
8	0.88	706.36	718.21	1852.52
9	1.00	815.45	969.96	2218.32
10	1.13	926.58	1268.19	2602.05
11	1.25	1039.77	1615.10	3002.78
12	1.38	1154.99	2012.75	3419.81
13	1.50	1272.26	2463.13	3852.57
14	1.63	1391.58	2968.18	4300.63
15	1.75	1512.94	3529.78	4763.61
16	1.88	1636.35	4149.77	5241.24
17	2.00	1761.80	4829.96	5733.27
18	2.13	1889.30	5572.12	6239.52
19	2.25	2018.84	6378.03	6759.82
20	2.38	2150.43	7249.42	7294.03
21	2.50	2284.06	8187.94	7839.93

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 7

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-20.74	3.81	-1534.83	2976.97
2	0.07	-170.88	292.58	0.00	2930.16
3	0.13	-147.81	476.45	0.00	3927.74
4	0.20	0.00	741.60	0.00	6706.65
5	0.27	0.00	1052.53	0.00	9492.91
6	0.33	0.00	1382.91	0.00	12412.03
7	0.40	0.00	1836.33	0.00	15581.49
8	0.46	0.00	2689.89	-173.74	18863.72
9	0.52	0.00	3749.26	-1298.44	22478.26
10	0.57	0.00	5049.87	-3443.29	26403.12
11	0.63	0.00	6628.04	-3485.43	29281.24
12	1.06	-5071.17	0.00	-14594.90	0.00
13	1.10	-4494.08	0.00	-14363.47	0.00
14	1.17	-3619.48	0.00	-12673.86	0.00
15	1.23	-2880.05	0.00	-11012.41	0.00
16	1.30	-2249.61	0.00	-9521.92	0.00
17	1.37	-1792.15	0.00	-8267.32	0.00
18	1.43	-1420.47	0.00	-7092.69	0.00
19	1.50	-1084.69	0.00	-5977.95	0.00
20	1.57	-789.85	0.00	-4905.92	0.00
21	1.63	-539.29	0.00	-3861.23	0.00
22	1.70	-334.88	0.00	-2827.83	0.00
23	1.77	-177.14	12.26	-1944.67	0.00
24	1.83	-65.47	43.40	-1144.89	0.00
25	1.90	0.00	8.00	-574.85	169.49

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-1244.00	0.00	-1376.43	496.42
2	0.13	-1162.05	0.00	-4203.38	2890.14
3	0.27	-849.10	0.00	-6886.11	6037.13
4	0.40	-165.55	44.75	-6962.46	8158.98
5	0.50	-10.53	442.34	-6988.79	5621.46
6	0.63	0.00	842.59	-5222.82	3272.91
7	0.77	0.00	1021.19	-3066.51	1565.84
8	0.90	0.00	1063.63	-1018.04	1018.04
9	1.03	0.00	1021.19	-1565.84	3066.51
10	1.17	0.00	842.59	-3272.91	5222.82
11	1.30	-10.53	442.34	-5621.46	6988.79
12	1.40	-165.55	44.75	-8158.98	6962.46
13	1.53	-849.10	0.00	-6037.13	6886.11
14	1.67	-1162.05	0.00	-2890.14	4203.38
15	1.80	-1244.00	0.00	-1376.43	1376.43
16	1.93	-1162.05	0.00	-4203.38	2890.14
17	2.07	-849.10	0.00	-6886.11	6037.13
18	2.20	-165.55	44.75	-6962.46	8158.98
19	2.30	-10.53	442.34	-6988.79	5621.46
20	2.43	0.00	842.59	-5222.82	3272.91
21	2.57	0.00	1021.19	-3066.51	1565.84
22	2.70	0.00	1063.63	-1018.04	1018.04
23	2.83	0.00	1021.19	-1565.84	3066.51
24	2.97	0.00	842.59	-3272.91	5222.82
25	3.10	-10.53	442.34	-5621.46	6988.79
26	3.20	-165.55	44.75	-8158.98	6962.46
27	3.33	-849.10	0.00	-6037.13	6886.11
28	3.47	-1162.05	0.00	-2890.14	4203.38
29	3.60	-1244.00	0.00	-1376.43	1376.43
30	3.73	-1162.05	0.00	-4203.38	2890.14
31	3.87	-849.10	0.00	-6886.11	6037.13
32	4.00	-165.55	44.75	-6962.46	8158.98
33	4.10	-10.53	442.34	-6988.79	5621.46

34	4.23	0.00	842.59	-5222.82	3272.91
35	4.37	0.00	1021.19	-3066.51	1565.84
36	4.50	0.00	1063.63	-1018.04	1018.04
37	4.63	0.00	1021.19	-1565.84	3066.51
38	4.77	0.00	842.59	-3272.91	5222.82
39	4.90	-10.53	442.34	-5621.46	6988.79
40	5.00	-165.55	44.75	-8158.98	6962.46
41	5.13	-849.10	0.00	-6037.13	6886.11
42	5.27	-1162.05	0.00	-2890.14	4203.38
43	5.40	-1244.00	0.00	-1376.43	1376.43
44	5.53	-1162.05	0.00	-4203.38	2890.14
45	5.67	-849.10	0.00	-6886.11	6037.13
46	5.80	-165.55	44.75	-6962.46	8158.98
47	5.90	-10.53	442.34	-6988.79	5621.46
48	6.03	0.00	842.59	-5222.82	3272.91
49	6.17	0.00	1021.19	-3066.51	1565.84
50	6.30	0.00	1063.63	-1018.04	1018.04
51	6.43	0.00	1021.19	-1565.84	3066.51
52	6.57	0.00	842.59	-3272.91	5222.82
53	6.70	-10.53	442.34	-5621.46	6988.79
54	6.80	-165.55	44.75	-8158.98	6962.46
55	6.93	-849.10	0.00	-6037.13	6886.11
56	7.07	-1162.05	0.00	-2890.14	4203.38
57	7.20	-1244.00	0.00	-1376.43	1376.43
58	7.33	-1162.05	0.00	-4203.38	2890.14
59	7.47	-849.10	0.00	-6886.11	6037.13
60	7.60	-165.55	44.75	-6962.46	8158.98
61	7.70	-10.53	442.34	-6988.79	5621.46
62	7.83	0.00	842.59	-5222.82	3272.91
63	7.97	0.00	1021.19	-3066.51	1565.84
64	8.10	0.00	1063.63	-1018.04	1018.04
65	8.23	0.00	1021.19	-1565.84	3066.51
66	8.37	0.00	842.59	-3272.91	5222.82
67	8.50	-10.53	442.34	-5621.46	6988.79
68	8.60	-165.55	44.75	-8158.98	6962.46
69	8.73	-849.10	0.00	-6037.13	6886.11
70	8.87	-1162.05	0.00	-2890.14	4203.38
71	9.00	-1244.00	0.00	-1376.43	1376.43
72	9.13	-1162.05	0.00	-4203.38	2890.14
73	9.27	-849.10	0.00	-6886.11	6037.13
74	9.40	-165.55	44.75	-6962.46	8158.98
75	9.50	-10.53	442.34	-6988.79	5621.46
76	9.63	0.00	842.59	-5222.82	3272.91
77	9.77	0.00	1021.19	-3066.51	1565.84
78	9.90	0.00	1063.63	-1018.04	1018.04
79	10.03	0.00	1021.19	-1565.84	3066.51
80	10.17	0.00	842.59	-3272.91	5222.82
81	10.30	-10.53	442.34	-5621.46	6988.79
82	10.40	-165.55	44.75	-8158.98	6962.46
83	10.53	-849.10	0.00	-6037.13	6886.11
84	10.67	-1162.05	0.00	-2890.14	4203.38
85	10.80	-1244.00	0.00	-1376.43	1376.43
86	10.93	-1162.05	0.00	-4203.38	2890.14
87	11.07	-849.10	0.00	-6886.11	6037.13
88	11.20	-165.55	44.75	-6962.46	8158.98
89	11.30	-10.53	442.34	-6988.79	5621.46
90	11.43	0.00	842.59	-5222.82	3272.91
91	11.57	0.00	1021.19	-3066.51	1565.84
92	11.70	0.00	1063.63	-1018.04	1018.04
93	11.83	0.00	1021.19	-1565.84	3066.51
94	11.97	0.00	842.59	-3272.91	5222.82
95	12.10	-10.53	442.34	-5621.46	6988.79
96	12.20	-165.55	44.75	-8158.98	6962.46
97	12.33	-849.10	0.00	-6037.13	6886.11
98	12.47	-1162.05	0.00	-2890.14	4203.38
99	12.60	-1244.00	0.00	-1376.43	1376.43
100	12.73	-1162.05	0.00	-4203.38	2890.14
101	12.87	-849.10	0.00	-6886.11	6037.13
102	13.00	-165.55	44.75	-6962.46	8158.98
103	13.10	-10.53	442.34	-6988.79	5621.46
104	13.23	0.00	842.59	-5222.82	3272.91
105	13.37	0.00	1021.19	-3066.51	1565.84
106	13.50	0.00	1063.63	-1018.04	1018.04
107	13.63	0.00	1021.19	-1565.84	3066.51
108	13.77	0.00	842.59	-3272.91	5222.82
109	13.90	-10.53	442.34	-5621.46	6988.79
110	14.00	-165.55	44.75	-8158.98	6962.46

111	14.13	-849.10	0.00	-6037.13	6886.11
112	14.27	-1162.05	0.00	-2890.14	4203.38
113	14.40	-1244.00	0.00	-1376.43	1376.43
114	14.53	-1162.05	0.00	-4203.38	2890.14
115	14.67	-849.10	0.00	-6886.11	6037.13
116	14.80	-165.55	44.75	-6962.46	8158.98
117	14.90	-10.53	442.34	-6988.79	5621.46
118	15.03	0.00	842.59	-5222.82	3272.91
119	15.17	0.00	1021.19	-3066.51	1565.84
120	15.30	0.00	1063.63	-1018.04	1018.04
121	15.43	0.00	1021.19	-1565.84	3066.51
122	15.57	0.00	842.59	-3272.91	5222.82
123	15.70	-10.53	442.34	-5621.46	6988.79
124	15.80	-165.55	44.75	-8158.98	6962.46
125	15.93	-849.10	0.00	-6037.13	6886.11
126	16.07	-1162.05	0.00	-2890.14	4203.38
127	16.20	-1244.00	0.00	-1376.43	1376.43
128	16.33	-1162.05	0.00	-4203.38	2890.14
129	16.47	-849.10	0.00	-6886.11	6037.13
130	16.60	-165.55	44.75	-6962.46	8158.98
131	16.70	-10.53	442.34	-6988.79	5621.46
132	16.83	0.00	842.59	-5222.82	3272.91
133	16.97	0.00	1021.19	-3066.51	1565.84
134	17.10	0.00	1063.63	-1018.04	1018.04
135	17.23	0.00	1021.19	-1565.84	3066.51
136	17.37	0.00	842.59	-3272.91	5222.82
137	17.50	-10.53	442.34	-5621.46	6988.79
138	17.60	-165.55	44.75	-8158.98	6962.46
139	17.73	-849.10	0.00	-6037.13	6886.11
140	17.87	-1162.05	0.00	-2890.14	4203.38
141	18.00	-1244.00	0.00	-1376.43	1376.43
142	18.13	-1162.05	0.00	-4203.38	2890.14
143	18.27	-849.10	0.00	-6886.11	6037.13
144	18.40	-165.55	44.75	-6962.46	8158.98
145	18.50	-10.53	442.34	-6988.79	5621.46
146	18.63	0.00	842.59	-5222.82	3272.91
147	18.77	0.00	1021.19	-3066.51	1565.84
148	18.90	0.00	1063.63	-1018.04	1018.04
149	19.03	0.00	1021.19	-1565.84	3066.51
150	19.17	0.00	842.59	-3272.91	5222.82
151	19.30	-10.53	442.34	-5621.46	6988.79
152	19.40	-165.55	44.75	-8158.98	6962.46
153	19.53	-849.10	0.00	-6037.13	6886.11
154	19.67	-1162.05	0.00	-2890.14	4203.38
155	19.80	-1244.00	0.00	-1376.43	1376.43
156	19.93	-1162.05	0.00	-4203.38	2890.14
157	20.07	-849.10	0.00	-6886.11	6037.13
158	20.20	-165.55	44.75	-6962.46	8158.98
159	20.30	-10.53	442.34	-6988.79	5621.46
160	20.43	0.00	842.59	-5222.82	3272.91
161	20.57	0.00	1021.19	-3066.51	1565.84
162	20.70	0.00	1063.63	-1018.04	1018.04
163	20.83	0.00	1021.19	-1565.84	3066.51
164	20.97	0.00	842.59	-3272.91	5222.82
165	21.10	-10.53	442.34	-5621.46	6988.79
166	21.20	-165.55	44.75	-8158.98	6962.46
167	21.33	-849.10	0.00	-6037.13	6886.11
168	21.47	-1162.05	0.00	-2890.14	4203.38
169	21.60	-1244.00	0.00	-1376.43	1376.43
170	21.73	-1162.05	0.00	-4203.38	2890.14
171	21.87	-849.10	0.00	-6886.11	6037.13
172	22.00	-165.55	44.75	-6962.46	8158.98
173	22.10	-10.53	442.34	-6988.79	5621.46
174	22.23	0.00	842.59	-5222.82	3272.91
175	22.37	0.00	1021.19	-3066.51	1565.84
176	22.50	0.00	1063.63	-1018.04	1018.04
177	22.63	0.00	1021.19	-1565.84	3066.51
178	22.77	0.00	842.59	-3272.91	5222.82
179	22.90	-10.53	442.34	-5621.46	6988.79
180	23.00	-165.56	44.75	-8158.99	6962.46
181	23.13	-849.10	0.00	-6037.12	6886.10
182	23.27	-1162.05	0.00	-2890.13	4203.37
183	23.40	-1244.00	0.00	-1376.43	1376.42
184	23.53	-1162.05	0.00	-4203.39	2890.10
185	23.67	-849.11	0.00	-6886.12	6037.10
186	23.80	-165.56	44.75	-6962.48	8158.98
187	23.90	-10.53	442.33	-6988.81	5621.45

188	24.03	0.00	842.58	-5222.85	3272.89
189	24.17	0.00	1021.18	-3066.54	1565.81
190	24.30	0.00	1063.62	-1018.08	1017.99
191	24.43	0.00	1021.18	-1565.88	3066.45
192	24.57	0.00	842.56	-3272.96	5222.74
193	24.70	-10.52	442.31	-5621.54	6988.69
194	24.80	-165.58	44.75	-8159.18	6962.36
195	24.93	-849.15	0.00	-6036.92	6885.98
196	25.07	-1162.11	0.00	-2889.92	4203.21
197	25.20	-1244.07	0.00	-1376.71	1376.21
198	25.33	-1162.15	0.00	-4203.74	2889.07
199	25.47	-849.23	0.00	-6886.58	6036.17
200	25.60	-165.69	44.75	-6963.02	8159.03
201	25.70	-10.52	442.13	-6989.35	5621.05
202	25.83	0.00	842.32	-5223.52	3272.38
203	25.97	0.00	1020.86	-3067.41	1565.19
204	26.10	0.00	1063.22	-1019.20	1016.53
205	26.23	0.00	1020.66	-1567.18	3064.58
206	26.37	0.00	841.89	-3274.51	5220.31
207	26.50	-10.50	441.42	-5623.71	6985.71
208	26.60	-166.47	44.74	-8165.21	6959.39
209	26.73	-850.55	0.00	-6030.72	6882.05
210	26.87	-1163.91	0.00	-2883.54	4198.15
211	27.00	-1246.39	0.00	-1385.06	1369.71
212	27.13	-1164.98	0.00	-4214.48	2857.57
213	27.27	-852.92	0.00	-6900.64	6007.97
214	27.40	-169.70	44.71	-6979.39	8160.71
215	27.50	-10.49	435.93	-7005.76	5608.89
216	27.63	0.00	834.60	-5243.88	3256.71
217	27.77	0.00	1010.96	-3093.78	1831.00
218	27.90	0.00	1051.11	-1053.21	972.81
219	28.03	0.00	1005.00	-1607.98	3009.27
220	28.17	0.00	821.36	-3324.14	5149.01
221	28.30	-9.82	413.84	-5695.30	6898.89
222	28.40	-193.93	45.17	-8365.92	6872.84
223	28.53	-895.32	0.00	-5877.73	6768.32
224	28.67	-1222.65	0.00	-2803.39	4052.29
225	28.80	-1324.42	0.00	-1632.69	1588.86
226	28.93	-1264.41	0.00	-4549.07	1856.08
227	29.07	-987.57	0.00	-7361.88	5075.51
228	29.20	-349.99	38.57	-7332.74	8155.05
229	29.33	-183.28	311.36	-7363.11	4663.71
230	29.47	-155.13	567.38	-5695.71	2132.25
231	29.60	-126.42	616.71	-4090.52	565.02
232	29.73	-96.70	547.09	-2992.91	369.81
233	29.87	-70.60	432.80	-2876.61	662.53
234	30.00	-47.24	17.79	-2911.81	627.22

Armature e tensioni nei materiali del muro

Combinazione n° 7

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
VR _{cd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
VR _{sd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
VR _d	Resistenza al taglio, espresso in [kg]

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Red}	V _{Rsd}
1	0.00	100, 30	10.05	8.04	0	0	1000.00	13007	--	--
2	0.13	100, 31	10.05	8.04	188045	-25157	1984.17	13157	--	--
3	0.25	100, 31	10.05	8.04	70620	-19091	368.60	13305	--	--
4	0.38	100, 32	10.05	8.04	38505	-15771	132.57	13453	--	--
5	0.50	100, 33	10.05	8.04	26473	-14598	67.64	13600	--	--
6	0.63	100, 33	14.07	8.04	27765	-19361	56.17	15369	--	--
7	0.75	100, 34	14.07	8.04	22437	-19118	37.44	15529	--	--
8	0.88	100, 35	14.07	8.04	18746	-19060	26.54	15688	--	--
9	1.00	100, 35	14.07	8.04	16072	-19118	19.71	15847	--	--
10	1.13	100, 36	14.07	8.04	14065	-19251	15.18	16004	--	--
11	1.25	100, 37	14.07	8.04	12513	-19436	12.03	16161	--	--

12	1.38	100, 37	14.07	8.04	11281	-19659	9.77	16317	--	--
13	1.50	100, 38	14.07	8.04	10283	-19909	8.08	16472	--	--
14	1.63	100, 39	14.07	8.04	9460	-20178	6.80	16627	--	--
15	1.75	100, 39	14.07	8.04	8771	-20464	5.80	16780	--	--
16	1.88	100, 40	14.07	8.04	8187	-20761	5.00	16933	--	--
17	2.00	100, 40	28.15	16.08	14993	-41103	8.51	21463	--	--
18	2.13	100, 41	14.07	8.04	7250	-21384	3.84	17237	--	--
19	2.25	100, 42	14.07	8.04	6870	-21705	3.40	17388	--	--
20	2.38	100, 42	14.07	8.04	6535	-22032	3.04	17539	--	--
21	2.50	100, 43	14.07	8.04	6238	-22363	2.73	17689	--	--

Armature e tensioni nei materiali della fondazione

Combinazione n° 7

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
V _{Rcd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
V _{Rsd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
VRd	Resistenza al taglio, espresso in [kg]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	-11345	546.94	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	38.78	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	23.81	15220	--	--
4	0.20	100, 40	8.04	8.04	0	11345	15.30	15220	--	--
5	0.27	100, 40	8.04	8.04	0	11345	10.78	15220	--	--
6	0.33	100, 40	8.04	8.04	0	11345	8.20	98910	118010	98910
7	0.40	100, 40	8.04	8.04	0	11345	6.18	106555	118010	106555
8	0.46	100, 40	8.04	8.04	0	11345	4.22	15220	--	--
9	0.52	100, 40	8.04	8.04	0	11345	3.03	15220	--	--
10	0.57	100, 40	8.04	8.04	0	11345	2.25	15220	--	--
11	0.63	100, 40	8.04	10.05	0	14108	2.13	15220	--	--

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	11345	1000.00	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	173.30	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	64.04	15220	--	--
4	0.20	100, 40	8.04	8.04	0	-11345	33.88	15220	--	--
5	0.27	100, 40	8.04	8.04	0	-11345	21.04	15220	--	--
6	0.33	100, 40	8.04	8.04	0	-11345	14.36	15220	--	--
7	0.40	100, 40	8.04	8.04	0	-11345	10.46	15220	--	--
8	0.47	100, 40	8.04	8.04	0	-11345	7.99	15220	--	--
9	0.53	100, 40	8.04	8.04	0	-11345	6.33	15220	--	--
10	0.60	100, 40	8.04	8.04	0	-11345	5.04	15220	--	--
11	0.67	100, 40	8.04	8.04	0	-11345	3.94	15220	--	--
12	0.73	100, 40	8.04	8.04	0	-11345	3.13	15220	--	--
13	0.80	100, 40	8.04	8.04	0	-11345	2.52	15220	--	--
14	0.84	100, 40	8.04	8.04	0	-11345	2.24	15220	--	--

Armature e tensioni piastre

Combinazione n° 7

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	8.90
2	0.13	2.83	2.83	0	-4090	9.49

3	0.27	2.83	2.83	0	-4090	12.24
4	0.40	2.83	2.83	0	-4090	26.09
5	0.50	2.83	2.83	0	4090	55.35
6	0.63	2.83	2.83	0	4090	12.21
7	0.77	2.83	2.83	0	4090	8.63
8	0.90	2.83	2.83	0	4090	7.93
9	1.03	2.83	2.83	0	4090	8.63
10	1.17	2.83	2.83	0	4090	12.21
11	1.30	2.83	2.83	0	4090	55.35
12	1.40	2.83	2.83	0	-4090	26.09
13	1.53	2.83	2.83	0	-4090	12.24
14	1.67	2.83	2.83	0	-4090	9.49
15	1.80	2.83	2.83	0	-4090	8.90
16	1.93	2.83	2.83	0	-4090	9.49
17	2.07	2.83	2.83	0	-4090	12.24
18	2.20	2.83	2.83	0	-4090	26.09
19	2.30	2.83	2.83	0	4090	55.35
20	2.43	2.83	2.83	0	4090	12.21
21	2.57	2.83	2.83	0	4090	8.63
22	2.70	2.83	2.83	0	4090	7.93
23	2.83	2.83	2.83	0	4090	8.63
24	2.97	2.83	2.83	0	4090	12.21
25	3.10	2.83	2.83	0	4090	55.35
26	3.20	2.83	2.83	0	-4090	26.09
27	3.33	2.83	2.83	0	-4090	12.24
28	3.47	2.83	2.83	0	-4090	9.49
29	3.60	2.83	2.83	0	-4090	8.90
30	3.73	2.83	2.83	0	-4090	9.49
31	3.87	2.83	2.83	0	-4090	12.24
32	4.00	2.83	2.83	0	-4090	26.09
33	4.10	2.83	2.83	0	4090	55.35
34	4.23	2.83	2.83	0	4090	12.21
35	4.37	2.83	2.83	0	4090	8.63
36	4.50	2.83	2.83	0	4090	7.93
37	4.63	2.83	2.83	0	4090	8.63
38	4.77	2.83	2.83	0	4090	12.21
39	4.90	2.83	2.83	0	4090	55.35
40	5.00	2.83	2.83	0	-4090	26.09
41	5.13	2.83	2.83	0	-4090	12.24
42	5.27	2.83	2.83	0	-4090	9.49
43	5.40	2.83	2.83	0	-4090	8.90
44	5.53	2.83	2.83	0	-4090	9.49
45	5.67	2.83	2.83	0	-4090	12.24
46	5.80	2.83	2.83	0	-4090	26.09
47	5.90	2.83	2.83	0	4090	55.35
48	6.03	2.83	2.83	0	4090	12.21
49	6.17	2.83	2.83	0	4090	8.63
50	6.30	2.83	2.83	0	4090	7.93
51	6.43	2.83	2.83	0	4090	8.63
52	6.57	2.83	2.83	0	4090	12.21
53	6.70	2.83	2.83	0	4090	55.35
54	6.80	2.83	2.83	0	-4090	26.09
55	6.93	2.83	2.83	0	-4090	12.24
56	7.07	2.83	2.83	0	-4090	9.49
57	7.20	2.83	2.83	0	-4090	8.90
58	7.33	2.83	2.83	0	-4090	9.49
59	7.47	2.83	2.83	0	-4090	12.24
60	7.60	2.83	2.83	0	-4090	26.09
61	7.70	2.83	2.83	0	4090	55.35
62	7.83	2.83	2.83	0	4090	12.21
63	7.97	2.83	2.83	0	4090	8.63
64	8.10	2.83	2.83	0	4090	7.93
65	8.23	2.83	2.83	0	4090	8.63
66	8.37	2.83	2.83	0	4090	12.21
67	8.50	2.83	2.83	0	4090	55.35
68	8.60	2.83	2.83	0	-4090	26.09
69	8.73	2.83	2.83	0	-4090	12.24
70	8.87	2.83	2.83	0	-4090	9.49
71	9.00	2.83	2.83	0	-4090	8.90
72	9.13	2.83	2.83	0	-4090	9.49
73	9.27	2.83	2.83	0	-4090	12.24
74	9.40	2.83	2.83	0	-4090	26.09
75	9.50	2.83	2.83	0	4090	55.35
76	9.63	2.83	2.83	0	4090	12.21
77	9.77	2.83	2.83	0	4090	8.63
78	9.90	2.83	2.83	0	4090	7.93
79	10.03	2.83	2.83	0	4090	8.63

80	10.17	2.83	2.83	0	4090	12.21
81	10.30	2.83	2.83	0	4090	55.35
82	10.40	2.83	2.83	0	-4090	26.09
83	10.53	2.83	2.83	0	-4090	12.24
84	10.67	2.83	2.83	0	-4090	9.49
85	10.80	2.83	2.83	0	-4090	8.90
86	10.93	2.83	2.83	0	-4090	9.49
87	11.07	2.83	2.83	0	-4090	12.24
88	11.20	2.83	2.83	0	-4090	26.09
89	11.30	2.83	2.83	0	4090	55.35
90	11.43	2.83	2.83	0	4090	12.21
91	11.57	2.83	2.83	0	4090	8.63
92	11.70	2.83	2.83	0	4090	7.93
93	11.83	2.83	2.83	0	4090	8.63
94	11.97	2.83	2.83	0	4090	12.21
95	12.10	2.83	2.83	0	4090	55.35
96	12.20	2.83	2.83	0	-4090	26.09
97	12.33	2.83	2.83	0	-4090	12.24
98	12.47	2.83	2.83	0	-4090	9.49
99	12.60	2.83	2.83	0	-4090	8.90
100	12.73	2.83	2.83	0	-4090	9.49
101	12.87	2.83	2.83	0	-4090	12.24
102	13.00	2.83	2.83	0	-4090	26.09
103	13.10	2.83	2.83	0	4090	55.35
104	13.23	2.83	2.83	0	4090	12.21
105	13.37	2.83	2.83	0	4090	8.63
106	13.50	2.83	2.83	0	4090	7.93
107	13.63	2.83	2.83	0	4090	8.63
108	13.77	2.83	2.83	0	4090	12.21
109	13.90	2.83	2.83	0	4090	55.35
110	14.00	2.83	2.83	0	-4090	26.09
111	14.13	2.83	2.83	0	-4090	12.24
112	14.27	2.83	2.83	0	-4090	9.49
113	14.40	2.83	2.83	0	-4090	8.90
114	14.53	2.83	2.83	0	-4090	9.49
115	14.67	2.83	2.83	0	-4090	12.24
116	14.80	2.83	2.83	0	-4090	26.09
117	14.90	2.83	2.83	0	4090	55.35
118	15.03	2.83	2.83	0	4090	12.21
119	15.17	2.83	2.83	0	4090	8.63
120	15.30	2.83	2.83	0	4090	7.93
121	15.43	2.83	2.83	0	4090	8.63
122	15.57	2.83	2.83	0	4090	12.21
123	15.70	2.83	2.83	0	4090	55.35
124	15.80	2.83	2.83	0	-4090	26.09
125	15.93	2.83	2.83	0	-4090	12.24
126	16.07	2.83	2.83	0	-4090	9.49
127	16.20	2.83	2.83	0	-4090	8.90
128	16.33	2.83	2.83	0	-4090	9.49
129	16.47	2.83	2.83	0	-4090	12.24
130	16.60	2.83	2.83	0	-4090	26.09
131	16.70	2.83	2.83	0	4090	55.35
132	16.83	2.83	2.83	0	4090	12.21
133	16.97	2.83	2.83	0	4090	8.63
134	17.10	2.83	2.83	0	4090	7.93
135	17.23	2.83	2.83	0	4090	8.63
136	17.37	2.83	2.83	0	4090	12.21
137	17.50	2.83	2.83	0	4090	55.35
138	17.60	2.83	2.83	0	-4090	26.09
139	17.73	2.83	2.83	0	-4090	12.24
140	17.87	2.83	2.83	0	-4090	9.49
141	18.00	2.83	2.83	0	-4090	8.90
142	18.13	2.83	2.83	0	-4090	9.49
143	18.27	2.83	2.83	0	-4090	12.24
144	18.40	2.83	2.83	0	-4090	26.09
145	18.50	2.83	2.83	0	4090	55.35
146	18.63	2.83	2.83	0	4090	12.21
147	18.77	2.83	2.83	0	4090	8.63
148	18.90	2.83	2.83	0	4090	7.93
149	19.03	2.83	2.83	0	4090	8.63
150	19.17	2.83	2.83	0	4090	12.21
151	19.30	2.83	2.83	0	4090	55.35
152	19.40	2.83	2.83	0	-4090	26.09
153	19.53	2.83	2.83	0	-4090	12.24
154	19.67	2.83	2.83	0	-4090	9.49
155	19.80	2.83	2.83	0	-4090	8.90
156	19.93	2.83	2.83	0	-4090	9.49

157	20.07	2.83	2.83	0	-4090	12.24
158	20.20	2.83	2.83	0	-4090	26.09
159	20.30	2.83	2.83	0	4090	55.35
160	20.43	2.83	2.83	0	4090	12.21
161	20.57	2.83	2.83	0	4090	8.63
162	20.70	2.83	2.83	0	4090	7.93
163	20.83	2.83	2.83	0	4090	8.63
164	20.97	2.83	2.83	0	4090	12.21
165	21.10	2.83	2.83	0	4090	55.35
166	21.20	2.83	2.83	0	-4090	26.09
167	21.33	2.83	2.83	0	-4090	12.24
168	21.47	2.83	2.83	0	-4090	9.49
169	21.60	2.83	2.83	0	-4090	8.90
170	21.73	2.83	2.83	0	-4090	9.49
171	21.87	2.83	2.83	0	-4090	12.24
172	22.00	2.83	2.83	0	-4090	26.09
173	22.10	2.83	2.83	0	4090	55.34
174	22.23	2.83	2.83	0	4090	12.21
175	22.37	2.83	2.83	0	4090	8.63
176	22.50	2.83	2.83	0	4090	7.93
177	22.63	2.83	2.83	0	4090	8.63
178	22.77	2.83	2.83	0	4090	12.21
179	22.90	2.83	2.83	0	4090	55.30
180	23.00	2.83	2.83	0	-4090	26.11
181	23.13	2.83	2.83	0	-4090	12.25
182	23.27	2.83	2.83	0	-4090	9.49
183	23.40	2.83	2.83	0	-4090	8.90
184	23.53	2.83	2.83	0	-4090	9.49
185	23.67	2.83	2.83	0	-4090	12.25
186	23.80	2.83	2.83	0	-4090	26.14
187	23.90	2.83	2.83	0	4090	55.14
188	24.03	2.83	2.83	0	4090	12.20
189	24.17	2.83	2.83	0	4090	8.62
190	24.30	2.83	2.83	0	4090	7.92
191	24.43	2.83	2.83	0	4090	8.62
192	24.57	2.83	2.83	0	4090	12.18
193	24.70	2.83	2.83	0	4090	54.69
194	24.80	2.83	2.83	0	-4090	26.30
195	24.93	2.83	2.83	0	-4090	12.30
196	25.07	2.83	2.83	0	-4090	9.53
197	25.20	2.83	2.83	0	-4090	8.94
198	25.33	2.83	2.83	0	-4090	9.54
199	25.47	2.83	2.83	0	-4090	12.36
200	25.60	2.83	2.83	0	-4090	26.73
201	25.70	2.83	2.83	0	4090	52.70
202	25.83	2.83	2.83	0	4090	12.03
203	25.97	2.83	2.83	0	4090	8.52
204	26.10	2.83	2.83	0	4090	7.81
205	26.23	2.83	2.83	0	4090	8.47
206	26.37	2.83	2.83	0	4090	11.83
207	26.50	2.83	2.83	0	4090	47.68
208	26.60	2.83	2.83	0	-4090	29.08
209	26.73	2.83	2.83	0	-4090	12.99
210	26.87	2.83	2.83	0	-4090	10.02
211	27.00	2.83	2.83	0	-4090	9.46
212	27.13	2.83	2.83	0	-4090	10.28
213	27.27	2.83	2.83	0	-4090	13.95
214	27.40	2.83	2.83	0	-4090	38.71
215	27.50	2.83	2.83	0	4090	31.77
216	27.63	2.83	2.83	0	4090	10.06
217	27.77	2.83	2.83	0	4090	7.30
218	27.90	2.83	2.83	0	4090	6.59
219	28.03	2.83	2.83	0	4090	6.85
220	28.17	2.83	2.83	0	4090	8.48
221	28.30	2.83	2.83	0	4090	16.92
222	28.40	2.83	2.83	0	-4090	90.55
223	28.53	2.83	2.83	0	-4090	33.36
224	28.67	2.83	2.83	0	-4090	19.58
225	28.80	2.83	2.83	0	-4090	16.77
226	28.93	2.83	2.83	0	-4090	16.52
227	29.07	2.83	2.83	0	-4090	17.53
228	29.20	2.83	2.83	0	-4090	19.49
229	29.33	2.83	2.83	0	-4090	22.31
230	29.47	2.83	2.83	0	-4090	26.36
231	29.60	2.83	2.83	0	4090	32.35
232	29.73	2.83	2.83	0	-4090	42.30
233	29.87	2.83	2.83	0	4090	57.93

234	30.00	2.83	2.83	0	4090	229.86
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Piastra fondazione valle

Nr.	X	A _R	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	3.29
2	0.13	2.83	2.83	0	-4090	3.52
3	0.27	2.83	2.83	0	-4090	4.82
4	0.40	2.83	2.83	0	-4090	24.70
5	0.50	2.83	2.83	0	4090	9.25
6	0.63	2.83	2.83	0	4090	4.85
7	0.77	2.83	2.83	0	4090	4.00
8	0.90	2.83	2.83	0	4090	3.85
9	1.03	2.83	2.83	0	4090	4.00
10	1.17	2.83	2.83	0	4090	4.85
11	1.30	2.83	2.83	0	4090	9.25
12	1.40	2.83	2.83	0	-4090	24.70
13	1.53	2.83	2.83	0	-4090	4.82
14	1.67	2.83	2.83	0	-4090	3.52
15	1.80	2.83	2.83	0	-4090	3.29
16	1.93	2.83	2.83	0	-4090	3.52
17	2.07	2.83	2.83	0	-4090	4.82
18	2.20	2.83	2.83	0	-4090	24.70
19	2.30	2.83	2.83	0	4090	9.25
20	2.43	2.83	2.83	0	4090	4.85
21	2.57	2.83	2.83	0	4090	4.00
22	2.70	2.83	2.83	0	4090	3.85
23	2.83	2.83	2.83	0	4090	4.00
24	2.97	2.83	2.83	0	4090	4.85
25	3.10	2.83	2.83	0	4090	9.25
26	3.20	2.83	2.83	0	-4090	24.70
27	3.33	2.83	2.83	0	-4090	4.82
28	3.47	2.83	2.83	0	-4090	3.52
29	3.60	2.83	2.83	0	-4090	3.29
30	3.73	2.83	2.83	0	-4090	3.52
31	3.87	2.83	2.83	0	-4090	4.82
32	4.00	2.83	2.83	0	-4090	24.70
33	4.10	2.83	2.83	0	4090	9.25
34	4.23	2.83	2.83	0	4090	4.85
35	4.37	2.83	2.83	0	4090	4.00
36	4.50	2.83	2.83	0	4090	3.85
37	4.63	2.83	2.83	0	4090	4.00
38	4.77	2.83	2.83	0	4090	4.85
39	4.90	2.83	2.83	0	4090	9.25
40	5.00	2.83	2.83	0	-4090	24.70
41	5.13	2.83	2.83	0	-4090	4.82
42	5.27	2.83	2.83	0	-4090	3.52
43	5.40	2.83	2.83	0	-4090	3.29
44	5.53	2.83	2.83	0	-4090	3.52
45	5.67	2.83	2.83	0	-4090	4.82
46	5.80	2.83	2.83	0	-4090	24.70
47	5.90	2.83	2.83	0	4090	9.25
48	6.03	2.83	2.83	0	4090	4.85
49	6.17	2.83	2.83	0	4090	4.00
50	6.30	2.83	2.83	0	4090	3.85
51	6.43	2.83	2.83	0	4090	4.00
52	6.57	2.83	2.83	0	4090	4.85
53	6.70	2.83	2.83	0	4090	9.25
54	6.80	2.83	2.83	0	-4090	24.70
55	6.93	2.83	2.83	0	-4090	4.82
56	7.07	2.83	2.83	0	-4090	3.52
57	7.20	2.83	2.83	0	-4090	3.29
58	7.33	2.83	2.83	0	-4090	3.52
59	7.47	2.83	2.83	0	-4090	4.82
60	7.60	2.83	2.83	0	-4090	24.70
61	7.70	2.83	2.83	0	4090	9.25
62	7.83	2.83	2.83	0	4090	4.85
63	7.97	2.83	2.83	0	4090	4.00
64	8.10	2.83	2.83	0	4090	3.85
65	8.23	2.83	2.83	0	4090	4.00
66	8.37	2.83	2.83	0	4090	4.85
67	8.50	2.83	2.83	0	4090	9.25
68	8.60	2.83	2.83	0	-4090	24.70
69	8.73	2.83	2.83	0	-4090	4.82
70	8.87	2.83	2.83	0	-4090	3.52
71	9.00	2.83	2.83	0	-4090	3.29
72	9.13	2.83	2.83	0	-4090	3.52

73	9.27	2.83	2.83	0	-4090	4.82
74	9.40	2.83	2.83	0	-4090	24.70
75	9.50	2.83	2.83	0	4090	9.25
76	9.63	2.83	2.83	0	4090	4.85
77	9.77	2.83	2.83	0	4090	4.00
78	9.90	2.83	2.83	0	4090	3.85
79	10.03	2.83	2.83	0	4090	4.00
80	10.17	2.83	2.83	0	4090	4.85
81	10.30	2.83	2.83	0	4090	9.25
82	10.40	2.83	2.83	0	-4090	24.70
83	10.53	2.83	2.83	0	-4090	4.82
84	10.67	2.83	2.83	0	-4090	3.52
85	10.80	2.83	2.83	0	-4090	3.29
86	10.93	2.83	2.83	0	-4090	3.52
87	11.07	2.83	2.83	0	-4090	4.82
88	11.20	2.83	2.83	0	-4090	24.70
89	11.30	2.83	2.83	0	4090	9.25
90	11.43	2.83	2.83	0	4090	4.85
91	11.57	2.83	2.83	0	4090	4.00
92	11.70	2.83	2.83	0	4090	3.85
93	11.83	2.83	2.83	0	4090	4.00
94	11.97	2.83	2.83	0	4090	4.85
95	12.10	2.83	2.83	0	4090	9.25
96	12.20	2.83	2.83	0	-4090	24.70
97	12.33	2.83	2.83	0	-4090	4.82
98	12.47	2.83	2.83	0	-4090	3.52
99	12.60	2.83	2.83	0	-4090	3.29
100	12.73	2.83	2.83	0	-4090	3.52
101	12.87	2.83	2.83	0	-4090	4.82
102	13.00	2.83	2.83	0	-4090	24.70
103	13.10	2.83	2.83	0	4090	9.25
104	13.23	2.83	2.83	0	4090	4.85
105	13.37	2.83	2.83	0	4090	4.00
106	13.50	2.83	2.83	0	4090	3.85
107	13.63	2.83	2.83	0	4090	4.00
108	13.77	2.83	2.83	0	4090	4.85
109	13.90	2.83	2.83	0	4090	9.25
110	14.00	2.83	2.83	0	-4090	24.70
111	14.13	2.83	2.83	0	-4090	4.82
112	14.27	2.83	2.83	0	-4090	3.52
113	14.40	2.83	2.83	0	-4090	3.29
114	14.53	2.83	2.83	0	-4090	3.52
115	14.67	2.83	2.83	0	-4090	4.82
116	14.80	2.83	2.83	0	-4090	24.70
117	14.90	2.83	2.83	0	4090	9.25
118	15.03	2.83	2.83	0	4090	4.85
119	15.17	2.83	2.83	0	4090	4.00
120	15.30	2.83	2.83	0	4090	3.85
121	15.43	2.83	2.83	0	4090	4.00
122	15.57	2.83	2.83	0	4090	4.85
123	15.70	2.83	2.83	0	4090	9.25
124	15.80	2.83	2.83	0	-4090	24.70
125	15.93	2.83	2.83	0	-4090	4.82
126	16.07	2.83	2.83	0	-4090	3.52
127	16.20	2.83	2.83	0	-4090	3.29
128	16.33	2.83	2.83	0	-4090	3.52
129	16.47	2.83	2.83	0	-4090	4.82
130	16.60	2.83	2.83	0	-4090	24.70
131	16.70	2.83	2.83	0	4090	9.25
132	16.83	2.83	2.83	0	4090	4.85
133	16.97	2.83	2.83	0	4090	4.00
134	17.10	2.83	2.83	0	4090	3.85
135	17.23	2.83	2.83	0	4090	4.00
136	17.37	2.83	2.83	0	4090	4.85
137	17.50	2.83	2.83	0	4090	9.25
138	17.60	2.83	2.83	0	-4090	24.70
139	17.73	2.83	2.83	0	-4090	4.82
140	17.87	2.83	2.83	0	-4090	3.52
141	18.00	2.83	2.83	0	-4090	3.29
142	18.13	2.83	2.83	0	-4090	3.52
143	18.27	2.83	2.83	0	-4090	4.82
144	18.40	2.83	2.83	0	-4090	24.70
145	18.50	2.83	2.83	0	4090	9.25
146	18.63	2.83	2.83	0	4090	4.85
147	18.77	2.83	2.83	0	4090	4.00
148	18.90	2.83	2.83	0	4090	3.85
149	19.03	2.83	2.83	0	4090	4.00

150	19.17	2.83	2.83	0	4090	4.85
151	19.30	2.83	2.83	0	4090	9.25
152	19.40	2.83	2.83	0	-4090	24.70
153	19.53	2.83	2.83	0	-4090	4.82
154	19.67	2.83	2.83	0	-4090	3.52
155	19.80	2.83	2.83	0	-4090	3.29
156	19.93	2.83	2.83	0	-4090	3.52
157	20.07	2.83	2.83	0	-4090	4.82
158	20.20	2.83	2.83	0	-4090	24.70
159	20.30	2.83	2.83	0	4090	9.25
160	20.43	2.83	2.83	0	4090	4.85
161	20.57	2.83	2.83	0	4090	4.00
162	20.70	2.83	2.83	0	4090	3.85
163	20.83	2.83	2.83	0	4090	4.00
164	20.97	2.83	2.83	0	4090	4.85
165	21.10	2.83	2.83	0	4090	9.25
166	21.20	2.83	2.83	0	-4090	24.70
167	21.33	2.83	2.83	0	-4090	4.82
168	21.47	2.83	2.83	0	-4090	3.52
169	21.60	2.83	2.83	0	-4090	3.29
170	21.73	2.83	2.83	0	-4090	3.52
171	21.87	2.83	2.83	0	-4090	4.82
172	22.00	2.83	2.83	0	-4090	24.70
173	22.10	2.83	2.83	0	4090	9.25
174	22.23	2.83	2.83	0	4090	4.85
175	22.37	2.83	2.83	0	4090	4.00
176	22.50	2.83	2.83	0	4090	3.85
177	22.63	2.83	2.83	0	4090	4.00
178	22.77	2.83	2.83	0	4090	4.85
179	22.90	2.83	2.83	0	4090	9.25
180	23.00	2.83	2.83	0	-4090	24.70
181	23.13	2.83	2.83	0	-4090	4.82
182	23.27	2.83	2.83	0	-4090	3.52
183	23.40	2.83	2.83	0	-4090	3.29
184	23.53	2.83	2.83	0	-4090	3.52
185	23.67	2.83	2.83	0	-4090	4.82
186	23.80	2.83	2.83	0	-4090	24.70
187	23.90	2.83	2.83	0	4090	9.25
188	24.03	2.83	2.83	0	4090	4.85
189	24.17	2.83	2.83	0	4090	4.00
190	24.30	2.83	2.83	0	4090	3.85
191	24.43	2.83	2.83	0	4090	4.00
192	24.57	2.83	2.83	0	4090	4.85
193	24.70	2.83	2.83	0	4090	9.25
194	24.80	2.83	2.83	0	-4090	24.70
195	24.93	2.83	2.83	0	-4090	4.82
196	25.07	2.83	2.83	0	-4090	3.52
197	25.20	2.83	2.83	0	-4090	3.29
198	25.33	2.83	2.83	0	-4090	3.52
199	25.47	2.83	2.83	0	-4090	4.82
200	25.60	2.83	2.83	0	-4090	24.68
201	25.70	2.83	2.83	0	4090	9.25
202	25.83	2.83	2.83	0	4090	4.86
203	25.97	2.83	2.83	0	4090	4.01
204	26.10	2.83	2.83	0	4090	3.85
205	26.23	2.83	2.83	0	4090	4.01
206	26.37	2.83	2.83	0	4090	4.86
207	26.50	2.83	2.83	0	4090	9.27
208	26.60	2.83	2.83	0	-4090	24.57
209	26.73	2.83	2.83	0	-4090	4.81
210	26.87	2.83	2.83	0	-4090	3.51
211	27.00	2.83	2.83	0	-4090	3.28
212	27.13	2.83	2.83	0	-4090	3.51
213	27.27	2.83	2.83	0	-4090	4.80
214	27.40	2.83	2.83	0	-4090	24.10
215	27.50	2.83	2.83	0	4090	9.38
216	27.63	2.83	2.83	0	4090	4.90
217	27.77	2.83	2.83	0	4090	4.05
218	27.90	2.83	2.83	0	4090	3.89
219	28.03	2.83	2.83	0	4090	4.07
220	28.17	2.83	2.83	0	4090	4.98
221	28.30	2.83	2.83	0	4090	9.88
222	28.40	2.83	2.83	0	-4090	21.09
223	28.53	2.83	2.83	0	-4090	4.57
224	28.67	2.83	2.83	0	-4090	3.35
225	28.80	2.83	2.83	0	-4090	3.09
226	28.93	2.83	2.83	0	-4090	3.23

227	29.07	2.83	2.83	0	-4090	4.14
228	29.20	2.83	2.83	0	-4090	11.69
229	29.33	2.83	2.83	0	4090	13.14
230	29.47	2.83	2.83	0	4090	7.21
231	29.60	2.83	2.83	0	4090	6.63
232	29.73	2.83	2.83	0	4090	7.48
233	29.87	2.83	2.83	0	4090	9.45
234	30.00	2.83	2.83	0	-4090	86.58

Analisi dei pali

Combinazione n° 7

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	11633.7
Verticale	[kg]	9546.3
Momento	[kgm]	-10747.1

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.37027
Verticale	[cm]	0.00478
Rotazione	[°]	-0.01042

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]	Tr [kg]	Mr [kgm]
1	32	-9378	10739	0	37189	0
2	33	26450	10739	0	37189	0

Dettagli calcolo della portanza

τ_m	tensione tangenziale media palo-terreno in [kg/cm ²]
σ_p	tensione sul terreno alla punta del palo in [kg/cm ²]
N_c, N_q, N_γ	fattori di capacità portante
N'_c, N'_q, N'_γ	fattori di capacità portante corretti
P_1	portanza caratteristica per attrito e aderenza laterale in [kg]
P_p	portanza caratteristica di punta in [kg]
P_d	portanza di progetto, in [kg]
W_p	peso del palo, in [kg]
T_d	portanza trasversale di progetto, espresso in [kg]
PT	Parametri Terreno utilizzati

Fila	N_c	N'_c	N_q	N'_q	N_γ	N'_γ	τ_m	σ_p
1	23.36	23.36	11.40	11.40	6.91	6.91	-0.06	1.04
2	23.36	23.36	11.40	11.40	6.91	6.91	-0.03	6.43

Fila	P_1	P_p	W_p	P_d	PT
1	7156	77070	11310	51504	MEDI
1	7156	77070	11310	51504	MINIMI
2	7156	77070	11310	52001	MEDI
2	7156	77070	11310	52001	MINIMI

Verifica della portanza

N	carico verticale in testa al palo in [kg]
P_d	portanza di progetto in [kg]
FS_v	fattori di sicurezza a carichi verticali (rapporto tra P_d/N)
T	carico orizzontale in testa al palo in [kg]
T_d	portanza trasversale di progetto in [kg]
FS_o	fattori di sicurezza a carichi orizzontali (rapporto tra T_d/T)

Fila	N	P_d	FS_v	T	T_d	FS_o
1	-9378	51504	5.492	10739	28607	2.664
2	26450	52001	1.966	10739	28607	2.664

Verifica a punzonamento della fondazione

D	diametro dei pali della fila espresso in [cm]
H _f	altezza della fondazione in corrispondenza della fila espressa in [cm]
S _i	superficie di aderenza palo-fondazione (H _f ID) espressa in [cmq]
N	sforzo normale trasmesso dal palo alla fondazione espresso in [kg]
τ _c	tensione tangenziale palo-fondazione espressa in [kg/cmq]

Fila	D	H _f	S _i	N	τ _c
1	80.0	40.0	10053.1	-9378	-0.93
2	80.0	40.0	10053.1	26450	2.63

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 7

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
M _u	momento ultimo espresso in [kgm]
N _u	sforzo normale ultimo espresso in [kg]
T _u	taglio ultimo espresso in [kg]
CS	coefficiente di sicurezza

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	-9378	10739	52.28	0	-208559	55705	5.19
2	0.23	-2416	-9091	10675	52.28	29770	-112007	55705	5.22
3	0.45	-4818	-8795	10617	52.28	41147	-75111	55705	5.25
4	0.68	-7207	-8492	10563	52.28	47169	-55578	55705	5.27
5	0.90	-9584	-8178	8680	52.28	50910	-43445	55705	5.31
6	1.13	-11537	-7856	6966	52.28	53147	-36191	55705	4.61
7	1.35	-13104	-7524	5416	52.28	54633	-31371	55705	4.17
8	1.57	-14323	-7184	4023	52.28	55693	-27934	55705	3.89
9	1.80	-15228	-6834	2778	52.28	56489	-25353	55705	3.71
10	2.02	-15853	-6476	1673	52.28	57112	-23331	55705	3.60
11	2.25	-16229	-6109	700	52.28	57619	-21687	55705	3.55
12	2.48	-16387	-5732	-151	52.28	58045	-20305	55705	3.54
13	2.70	-16353	-5347	-888	52.28	58417	-19100	55705	3.57
14	2.93	-16153	-4952	-1521	52.28	58752	-18013	55705	3.64
15	3.15	-15811	-4549	-2058	52.28	59066	-16994	55705	3.74
16	3.38	-15348	-4136	-2507	52.28	59372	-16001	55705	3.87
17	3.60	-14783	-3715	-2878	52.28	59682	-14997	55705	4.04
18	3.83	-14136	-3285	-3179	52.28	60007	-13943	55705	4.25
19	4.05	-13421	-2845	-3417	52.28	60360	-12796	55705	4.50
20	4.28	-12652	-2397	-3600	52.28	60757	-11510	55705	4.80
21	4.50	-11842	-1939	-3734	52.28	61215	-10025	55705	5.17
22	4.73	-11002	-1473	-3826	52.28	61756	-8268	55705	5.61
23	4.95	-10141	-998	-3883	52.28	62413	-6140	55705	6.15
24	5.17	-9267	-513	-3909	52.28	63226	-3502	55705	6.82
25	5.40	-8388	-20	-3910	52.28	64259	-153	55705	7.66
26	5.63	-7508	482	-3890	52.28	65241	4192	55705	8.69
27	5.85	-6633	994	-3855	52.28	66528	9967	55705	10.03
28	6.08	-5765	1514	-3806	52.28	68305	17937	55705	11.85
29	6.30	-4909	1824	-3546	52.28	70113	26047	55705	14.28
30	6.53	-4111	2106	-3255	52.28	72599	37198	55705	17.11
31	6.75	-3379	2389	-2943	52.28	76212	53889	55705	18.93
32	6.98	-2717	2672	-2619	52.28	80998	79664	55705	21.27
33	7.20	-2127	2955	-2290	52.28	87693	121799	55705	24.32
34	7.42	-1612	3237	-1960	52.28	96288	193369	55705	28.42
35	7.65	-1171	3520	-1634	52.28	102172	307139	55705	34.08
36	7.88	-803	3803	-1315	52.28	95013	449813	55705	42.36
37	8.10	-507	4086	-1004	52.28	75299	606307	55705	55.47
38	8.33	-281	4368	-703	52.28	48110	746737	55705	79.18
39	8.55	-123	4651	-413	52.28	20534	775459	55705	134.78
40	8.78	-30	4934	-134	52.28	4796	784407	55705	158.98
41	9.00	0	5217	-134	52.28	0	787133	55705	150.89

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	26450	10739	52.28	0	787133	55705	5.19
2	0.23	-2416	26726	10675	52.28	61754	683061	55705	5.22

3	0.45	-4818	26988	10617	52.28	89483	501220	55705	5.25
4	0.68	-7207	27236	10563	52.28	100796	380919	55705	5.27
5	0.90	-9584	27468	8680	52.28	101902	292064	55705	6.42
6	1.13	-11537	27685	6966	52.28	99871	239665	55705	8.00
7	1.35	-13104	27887	5416	52.28	97578	207655	55705	7.45
8	1.57	-14323	28073	4023	52.28	95753	187682	55705	6.69
9	1.80	-15228	28245	2778	52.28	94541	175361	55705	6.21
10	2.02	-15853	28402	1673	52.28	93672	167827	55705	5.91
11	2.25	-16229	28544	700	52.28	93227	163972	55705	5.74
12	2.48	-16387	28672	-151	52.28	93104	162905	55705	5.68
13	2.70	-16353	28784	-888	52.28	93246	164131	55705	5.70
14	2.93	-16153	28881	-1521	52.28	93622	167397	55705	5.80
15	3.15	-15811	28963	-2058	52.28	94224	172609	55705	5.96
16	3.38	-15348	29031	-2507	52.28	95000	179699	55705	6.19
17	3.60	-14783	29083	-2878	52.28	95833	188530	55705	6.48
18	3.83	-14136	29121	-3179	52.28	96872	199565	55705	6.85
19	4.05	-13421	29144	-3417	52.28	97999	212811	55705	7.30
20	4.28	-12652	29151	-3600	52.28	99296	228791	55705	7.85
21	4.50	-11842	29144	-3734	52.28	100244	246711	55705	8.47
22	4.73	-11002	29122	-3826	52.28	101175	267813	55705	9.20
23	4.95	-10141	29085	-3883	52.28	101906	292275	55705	10.05
24	5.17	-9267	29033	-3909	52.28	102177	320100	55705	11.03
25	5.40	-8388	28966	-3910	52.28	101807	351571	55705	12.14
26	5.63	-7508	28884	-3890	52.28	100427	386345	55705	13.38
27	5.85	-6633	28787	-3855	52.28	97544	423357	55705	14.45
28	6.08	-5765	28676	-3806	52.28	93471	464893	55705	14.64
29	6.30	-4909	28914	-3546	52.28	87682	516427	55705	15.71
30	6.53	-4111	29196	-3255	52.28	80471	571460	55705	17.11
31	6.75	-3379	29479	-2943	52.28	71902	627289	55705	18.93
32	6.98	-2717	29762	-2619	52.28	62159	680956	55705	21.27
33	7.20	-2127	30045	-2290	52.28	51737	730678	55705	24.32
34	7.42	-1612	30327	-1960	52.28	40614	764043	55705	25.19
35	7.65	-1171	30610	-1634	52.28	29472	770378	55705	25.17
36	7.88	-803	30893	-1315	52.28	20169	775666	55705	25.11
37	8.10	-507	31176	-1004	52.28	12694	779916	55705	25.02
38	8.33	-281	31458	-703	52.28	7007	783150	55705	24.89
39	8.55	-123	31741	-413	52.28	3048	785401	55705	24.74
40	8.78	-30	32024	-134	52.28	741	786712	55705	24.57
41	9.00	0	32306	-134	52.28	0	787133	55705	24.36

COMBINAZIONE n° 8

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		

Incremento sismico della spinta	4770.00	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	30.61	[°]		

Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	12368.59	[kg]		
Risultante dei carichi applicati in dir. verticale	11911.18	[kg]		
Sforzo normale sul piano di posa della fondazione	11911.18	[kg]		
Sforzo tangenziale sul piano di posa della fondazione	12368.59	[kg]		
Eccentricità rispetto al baricentro della fondazione	0.93	[m]		
Lunghezza fondazione reagente	0.05	[m]		
Risultante in fondazione	17171.44	[kg]		
Inclinazione della risultante (rispetto alla normale)	46.08	[°]		
Momento rispetto al baricentro della fondazione	11110.82	[kgm]		

Sollecitazioni paramento

Combinazione n° 8

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	13.56	221.53
3	0.25	191.59	55.30	456.05
4	0.38	290.45	126.85	703.56
5	0.50	391.36	229.84	964.41
6	0.63	494.32	366.61	1254.78
7	0.75	599.32	542.22	1590.03
8	0.88	706.36	761.17	1950.71
9	1.00	815.45	1026.06	2330.53
10	1.13	926.58	1339.20	2728.29
11	1.25	1039.77	1702.76	3143.04
12	1.38	1154.99	2118.82	3574.10
13	1.50	1272.26	2589.37	4020.89
14	1.63	1391.58	3116.33	4482.97
15	1.75	1512.94	3701.60	4959.98
16	1.88	1636.35	4347.01	5451.63
17	2.00	1761.80	5054.38	5957.69
18	2.13	1889.30	5825.47	6477.97
19	2.25	2018.84	6662.06	7012.29
20	2.38	2150.43	7565.88	7560.52
21	2.50	2284.06	8538.59	8120.45

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 8

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-22.94	4.17	-1690.22	3288.06
2	0.07	-188.47	323.25	0.00	3241.23
3	0.13	-162.30	526.96	0.00	4350.86
4	0.20	0.00	820.84	0.00	7425.72
5	0.27	0.00	1165.76	0.00	10508.87
6	0.33	0.00	1532.62	0.00	13738.75
7	0.40	0.00	2035.81	0.00	17245.04
8	0.46	0.00	2980.77	-144.64	20874.85
9	0.52	0.00	4153.30	-1379.71	24871.57
10	0.57	0.00	5592.53	-3742.19	29210.91
11	0.63	0.00	7338.55	-3784.13	32394.57
12	1.06	-4561.07	0.00	-12951.91	0.00
13	1.10	-4049.34	0.00	-12720.26	0.00
14	1.17	-3272.17	0.00	-11251.32	0.00
15	1.23	-2611.86	0.00	-9805.75	0.00
16	1.30	-2046.45	0.00	-8502.09	0.00
17	1.37	-1629.05	0.00	-7394.28	0.00
18	1.43	-1287.28	0.00	-6352.87	0.00
19	1.50	-979.75	0.00	-5361.19	0.00
20	1.57	-710.63	0.00	-4405.02	0.00
21	1.63	-482.71	0.00	-3471.59	0.00
22	1.70	-297.53	0.00	-2547.71	0.00
23	1.77	-155.52	1.66	-1756.30	0.00
24	1.83	-56.18	34.17	-1029.98	0.00
25	1.90	0.00	7.01	-484.94	159.27

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-1373.48	0.00	-1519.67	548.35
2	0.13	-1283.01	0.00	-4640.84	3206.56
3	0.27	-937.49	0.00	-7602.83	6681.50
4	0.40	-182.80	49.44	-7688.56	9010.76
5	0.50	-8.95	488.44	-7714.80	6210.95
6	0.63	0.00	930.28	-5763.99	3617.75
7	0.77	0.00	1127.48	-3382.82	1731.25
8	0.90	0.00	1174.33	-1121.25	1121.25
9	1.03	0.00	1127.48	-1731.25	3382.82
10	1.17	0.00	930.28	-3617.75	5763.99
11	1.30	-8.95	488.44	-6210.95	7714.80
12	1.40	-182.80	49.44	-9010.76	7688.56
13	1.53	-937.49	0.00	-6681.50	7602.83
14	1.67	-1283.01	0.00	-3206.56	4640.84
15	1.80	-1373.48	0.00	-1519.67	1519.67
16	1.93	-1283.01	0.00	-4640.84	3206.56
17	2.07	-937.49	0.00	-7602.83	6681.50
18	2.20	-182.80	49.44	-7688.56	9010.76
19	2.30	-8.95	488.44	-7714.80	6210.95
20	2.43	0.00	930.28	-5763.99	3617.75
21	2.57	0.00	1127.48	-3382.82	1731.25
22	2.70	0.00	1174.33	-1121.25	1121.25
23	2.83	0.00	1127.48	-1731.25	3382.82
24	2.97	0.00	930.28	-3617.75	5763.99
25	3.10	-8.95	488.44	-6210.95	7714.80
26	3.20	-182.80	49.44	-9010.76	7688.56
27	3.33	-937.49	0.00	-6681.50	7602.83
28	3.47	-1283.01	0.00	-3206.56	4640.84
29	3.60	-1373.48	0.00	-1519.67	1519.67
30	3.73	-1283.01	0.00	-4640.84	3206.56
31	3.87	-937.49	0.00	-7602.83	6681.50
32	4.00	-182.80	49.44	-7688.56	9010.76
33	4.10	-8.95	488.44	-7714.80	6210.95

34	4.23	0.00	930.28	-5763.99	3617.75
35	4.37	0.00	1127.48	-3382.82	1731.25
36	4.50	0.00	1174.33	-1121.25	1121.25
37	4.63	0.00	1127.48	-1731.25	3382.82
38	4.77	0.00	930.28	-3617.75	5763.99
39	4.90	-8.95	488.44	-6210.95	7714.80
40	5.00	-182.80	49.44	-9010.76	7688.56
41	5.13	-937.49	0.00	-6681.50	7602.83
42	5.27	-1283.01	0.00	-3206.56	4640.84
43	5.40	-1373.48	0.00	-1519.67	1519.67
44	5.53	-1283.01	0.00	-4640.84	3206.56
45	5.67	-937.49	0.00	-7602.83	6681.50
46	5.80	-182.80	49.44	-7688.56	9010.76
47	5.90	-8.95	488.44	-7714.80	6210.95
48	6.03	0.00	930.28	-5763.99	3617.75
49	6.17	0.00	1127.48	-3382.82	1731.25
50	6.30	0.00	1174.33	-1121.25	1121.25
51	6.43	0.00	1127.48	-1731.25	3382.82
52	6.57	0.00	930.28	-3617.75	5763.99
53	6.70	-8.95	488.44	-6210.95	7714.80
54	6.80	-182.80	49.44	-9010.76	7688.56
55	6.93	-937.49	0.00	-6681.50	7602.83
56	7.07	-1283.01	0.00	-3206.56	4640.84
57	7.20	-1373.48	0.00	-1519.67	1519.67
58	7.33	-1283.01	0.00	-4640.84	3206.56
59	7.47	-937.49	0.00	-7602.83	6681.50
60	7.60	-182.80	49.44	-7688.56	9010.76
61	7.70	-8.95	488.44	-7714.80	6210.95
62	7.83	0.00	930.28	-5763.99	3617.75
63	7.97	0.00	1127.48	-3382.82	1731.25
64	8.10	0.00	1174.33	-1121.25	1121.25
65	8.23	0.00	1127.48	-1731.25	3382.82
66	8.37	0.00	930.28	-3617.75	5763.99
67	8.50	-8.95	488.44	-6210.95	7714.80
68	8.60	-182.80	49.44	-9010.76	7688.56
69	8.73	-937.49	0.00	-6681.50	7602.83
70	8.87	-1283.01	0.00	-3206.56	4640.84
71	9.00	-1373.48	0.00	-1519.67	1519.67
72	9.13	-1283.01	0.00	-4640.84	3206.56
73	9.27	-937.49	0.00	-7602.83	6681.50
74	9.40	-182.80	49.44	-7688.56	9010.76
75	9.50	-8.95	488.44	-7714.80	6210.95
76	9.63	0.00	930.28	-5763.99	3617.75
77	9.77	0.00	1127.48	-3382.82	1731.25
78	9.90	0.00	1174.33	-1121.25	1121.25
79	10.03	0.00	1127.48	-1731.25	3382.82
80	10.17	0.00	930.28	-3617.75	5763.99
81	10.30	-8.95	488.44	-6210.95	7714.80
82	10.40	-182.80	49.44	-9010.76	7688.56
83	10.53	-937.49	0.00	-6681.50	7602.83
84	10.67	-1283.01	0.00	-3206.56	4640.84
85	10.80	-1373.48	0.00	-1519.67	1519.67
86	10.93	-1283.01	0.00	-4640.84	3206.56
87	11.07	-937.49	0.00	-7602.83	6681.50
88	11.20	-182.80	49.44	-7688.56	9010.76
89	11.30	-8.95	488.44	-7714.80	6210.95
90	11.43	0.00	930.28	-5763.99	3617.75
91	11.57	0.00	1127.48	-3382.82	1731.25
92	11.70	0.00	1174.33	-1121.25	1121.25
93	11.83	0.00	1127.48	-1731.25	3382.82
94	11.97	0.00	930.28	-3617.75	5763.99
95	12.10	-8.95	488.44	-6210.95	7714.80
96	12.20	-182.80	49.44	-9010.76	7688.56
97	12.33	-937.49	0.00	-6681.50	7602.83
98	12.47	-1283.01	0.00	-3206.56	4640.84
99	12.60	-1373.48	0.00	-1519.67	1519.67
100	12.73	-1283.01	0.00	-4640.84	3206.56
101	12.87	-937.49	0.00	-7602.83	6681.50
102	13.00	-182.80	49.44	-7688.56	9010.76
103	13.10	-8.95	488.44	-7714.80	6210.95
104	13.23	0.00	930.28	-5763.99	3617.75
105	13.37	0.00	1127.48	-3382.82	1731.25
106	13.50	0.00	1174.33	-1121.25	1121.25
107	13.63	0.00	1127.48	-1731.25	3382.82
108	13.77	0.00	930.28	-3617.75	5763.99
109	13.90	-8.95	488.44	-6210.95	7714.80
110	14.00	-182.80	49.44	-9010.76	7688.56

111	14.13	-937.49	0.00	-6681.50	7602.83
112	14.27	-1283.01	0.00	-3206.56	4640.84
113	14.40	-1373.48	0.00	-1519.67	1519.67
114	14.53	-1283.01	0.00	-4640.84	3206.56
115	14.67	-937.49	0.00	-7602.83	6681.50
116	14.80	-182.80	49.44	-7688.56	9010.76
117	14.90	-8.95	488.44	-7714.80	6210.95
118	15.03	0.00	930.28	-5763.99	3617.75
119	15.17	0.00	1127.48	-3382.82	1731.25
120	15.30	0.00	1174.33	-1121.25	1121.25
121	15.43	0.00	1127.48	-1731.25	3382.82
122	15.57	0.00	930.28	-3617.75	5763.99
123	15.70	-8.95	488.44	-6210.95	7714.80
124	15.80	-182.80	49.44	-9010.76	7688.56
125	15.93	-937.49	0.00	-6681.50	7602.83
126	16.07	-1283.01	0.00	-3206.56	4640.84
127	16.20	-1373.48	0.00	-1519.67	1519.67
128	16.33	-1283.01	0.00	-4640.84	3206.56
129	16.47	-937.49	0.00	-7602.83	6681.50
130	16.60	-182.80	49.44	-7688.56	9010.76
131	16.70	-8.95	488.44	-7714.80	6210.95
132	16.83	0.00	930.28	-5763.99	3617.75
133	16.97	0.00	1127.48	-3382.82	1731.25
134	17.10	0.00	1174.33	-1121.25	1121.25
135	17.23	0.00	1127.48	-1731.25	3382.82
136	17.37	0.00	930.28	-3617.75	5763.99
137	17.50	-8.95	488.44	-6210.95	7714.80
138	17.60	-182.80	49.44	-9010.76	7688.56
139	17.73	-937.49	0.00	-6681.50	7602.83
140	17.87	-1283.01	0.00	-3206.56	4640.84
141	18.00	-1373.48	0.00	-1519.67	1519.67
142	18.13	-1283.01	0.00	-4640.84	3206.56
143	18.27	-937.49	0.00	-7602.83	6681.50
144	18.40	-182.80	49.44	-7688.56	9010.76
145	18.50	-8.95	488.44	-7714.80	6210.95
146	18.63	0.00	930.28	-5763.99	3617.75
147	18.77	0.00	1127.48	-3382.82	1731.25
148	18.90	0.00	1174.33	-1121.25	1121.25
149	19.03	0.00	1127.48	-1731.25	3382.82
150	19.17	0.00	930.28	-3617.75	5763.99
151	19.30	-8.95	488.44	-6210.95	7714.80
152	19.40	-182.80	49.44	-9010.76	7688.56
153	19.53	-937.49	0.00	-6681.50	7602.83
154	19.67	-1283.01	0.00	-3206.56	4640.84
155	19.80	-1373.48	0.00	-1519.67	1519.67
156	19.93	-1283.01	0.00	-4640.84	3206.56
157	20.07	-937.49	0.00	-7602.83	6681.50
158	20.20	-182.80	49.44	-7688.56	9010.76
159	20.30	-8.95	488.44	-7714.80	6210.95
160	20.43	0.00	930.28	-5763.99	3617.75
161	20.57	0.00	1127.48	-3382.82	1731.25
162	20.70	0.00	1174.33	-1121.25	1121.25
163	20.83	0.00	1127.48	-1731.25	3382.82
164	20.97	0.00	930.28	-3617.75	5763.99
165	21.10	-8.95	488.44	-6210.95	7714.80
166	21.20	-182.80	49.44	-9010.76	7688.56
167	21.33	-937.49	0.00	-6681.50	7602.83
168	21.47	-1283.01	0.00	-3206.56	4640.84
169	21.60	-1373.48	0.00	-1519.67	1519.67
170	21.73	-1283.01	0.00	-4640.84	3206.56
171	21.87	-937.49	0.00	-7602.83	6681.50
172	22.00	-182.80	49.44	-7688.56	9010.76
173	22.10	-8.95	488.44	-7714.80	6210.95
174	22.23	0.00	930.28	-5763.99	3617.75
175	22.37	0.00	1127.48	-3382.82	1731.25
176	22.50	0.00	1174.33	-1121.25	1121.24
177	22.63	0.00	1127.48	-1731.25	3382.82
178	22.77	0.00	930.28	-3617.76	5763.98
179	22.90	-8.95	488.44	-6210.95	7714.80
180	23.00	-182.80	49.44	-9010.76	7688.56
181	23.13	-937.49	0.00	-6681.50	7602.83
182	23.27	-1283.01	0.00	-3206.55	4640.83
183	23.40	-1373.49	0.00	-1519.68	1519.67
184	23.53	-1283.01	0.00	-4640.85	3206.52
185	23.67	-937.49	0.00	-7602.85	6681.47
186	23.80	-182.80	49.44	-7688.58	9010.76
187	23.90	-8.95	488.43	-7714.82	6210.93

188	24.03	0.00	930.27	-5764.01	3617.73
189	24.17	0.00	1127.46	-3382.85	1731.23
190	24.30	0.00	1174.32	-1121.29	1121.19
191	24.43	0.00	1127.46	-1731.30	3382.75
192	24.57	0.00	930.25	-3617.81	5763.90
193	24.70	-8.95	488.40	-6211.03	7714.69
194	24.80	-182.83	49.44	-9010.98	7688.45
195	24.93	-937.54	0.00	-6681.27	7602.69
196	25.07	-1283.08	0.00	-3206.31	4640.65
197	25.20	-1373.57	0.00	-1519.99	1519.43
198	25.33	-1283.11	0.00	-4641.24	3205.37
199	25.47	-937.63	0.00	-7603.36	6680.44
200	25.60	-182.95	49.43	-7689.18	9010.82
201	25.70	-8.95	488.20	-7715.41	6210.49
202	25.83	0.00	929.99	-5764.75	3617.17
203	25.97	0.00	1127.11	-3383.81	1730.53
204	26.10	0.00	1173.88	-1122.53	1119.58
205	26.23	0.00	1126.89	-1732.74	3380.69
206	26.37	0.00	929.51	-3619.52	5761.22
207	26.50	-8.93	487.42	-6213.43	7711.40
208	26.60	-183.80	49.43	-9017.64	7685.17
209	26.73	-939.09	0.00	-6674.34	7598.35
210	26.87	-1285.06	0.00	-3199.06	4635.07
211	27.00	-1376.12	0.00	-1529.21	1512.25
212	27.13	-1286.24	0.00	-4653.09	3170.34
213	27.27	-941.71	0.00	-7618.88	6649.18
214	27.40	-187.38	49.39	-7707.25	9012.66
215	27.50	-8.92	481.36	-7733.53	6197.07
216	27.63	0.00	921.46	-5787.23	3599.89
217	27.77	0.00	1116.18	-3412.91	1709.36
218	27.90	0.00	1160.50	-1160.04	1071.41
219	28.03	0.00	1109.60	-1777.87	3319.66
220	28.17	0.00	906.84	-3674.44	5682.51
221	28.30	-8.36	456.97	-6292.53	7615.55
222	28.40	-214.12	49.27	-9239.26	7589.60
223	28.53	-988.51	0.00	-6503.13	7472.79
224	28.67	-1349.92	0.00	-3106.08	4474.03
225	28.80	-1462.27	0.00	-1802.60	1317.44
226	28.93	-1396.01	0.00	-5022.49	2057.99
227	29.07	-1090.36	0.00	-8127.81	5616.13
228	29.20	-386.42	42.58	-8097.58	9005.87
229	29.33	-151.84	343.76	-8127.82	5155.12
230	29.47	-128.33	626.42	-6285.98	2358.28
231	29.60	-104.32	680.86	-4512.85	625.24
232	29.73	-79.41	603.97	-3299.85	310.91
233	29.87	-57.50	477.74	-3179.75	575.42
234	30.00	-52.31	16.26	-3215.39	545.33

Armature e tensioni nei materiali del muro

Combinazione n° 8

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
VR _{rd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
VR _{sd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
VR _d	Resistenza al taglio, espresso in [kg]

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Red}	V _{Rsd}
1	0.00	100, 30	10.05	8.04	0	0	1000.00	13007	--	--
2	0.13	100, 31	10.05	8.04	174353	-24938	1839.70	13157	--	--
3	0.25	100, 31	10.05	8.04	63619	-18362	332.06	13305	--	--
4	0.38	100, 32	10.05	8.04	35144	-15348	121.00	13453	--	--
5	0.50	100, 33	10.05	8.04	24405	-14332	62.36	13600	--	--
6	0.63	100, 33	14.07	8.04	25765	-19109	52.12	15369	--	--
7	0.75	100, 34	14.07	8.04	20914	-18922	34.90	15529	--	--
8	0.88	100, 35	14.07	8.04	17540	-18901	24.83	15688	--	--
9	1.00	100, 35	14.07	8.04	15088	-18985	18.50	15847	--	--
10	1.13	100, 36	14.07	8.04	13241	-19137	14.29	16004	--	--
11	1.25	100, 37	14.07	8.04	11808	-19337	11.36	16161	--	--

12	1.38	100, 37	14.07	8.04	10668	-19571	9.24	16317	--	--
13	1.50	100, 38	14.07	8.04	9743	-19829	7.66	16472	--	--
14	1.63	100, 39	14.07	8.04	8978	-20106	6.45	16627	--	--
15	1.75	100, 39	14.07	8.04	8337	-20397	5.51	16780	--	--
16	1.88	100, 40	14.07	8.04	7792	-20700	4.76	16933	--	--
17	2.00	100, 40	28.15	16.08	14293	-41004	8.11	21463	--	--
18	2.13	100, 41	14.07	8.04	6918	-21330	3.66	17237	--	--
19	2.25	100, 42	14.07	8.04	6562	-21654	3.25	17388	--	--
20	2.38	100, 42	14.07	8.04	6248	-21984	2.91	17539	--	--
21	2.50	100, 43	14.07	8.04	5970	-22318	2.61	17689	--	--

Armature e tensioni nei materiali della fondazione

Combinazione n° 8

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
V _{Rcd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
V _{Rsd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
VRd	Resistenza al taglio, espresso in [kg]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	-11345	494.55	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	35.10	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	21.53	15220	--	--
4	0.20	100, 40	8.04	8.04	0	11345	13.82	15220	--	--
5	0.27	100, 40	8.04	8.04	0	11345	9.73	15220	--	--
6	0.33	100, 40	8.04	8.04	0	11345	7.40	98910	118010	98910
7	0.40	100, 40	8.04	8.04	0	11345	5.57	106555	118010	106555
8	0.46	100, 40	8.04	8.04	0	11345	3.81	15220	--	--
9	0.52	100, 40	8.04	8.04	0	11345	2.73	15220	--	--
10	0.57	100, 40	8.04	8.04	0	11345	2.03	15220	--	--
11	0.63	100, 40	8.04	10.05	0	14108	1.92	15220	--	--

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	11345	1000.00	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	201.95	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	72.95	15220	--	--
4	0.20	100, 40	8.04	8.04	0	-11345	38.13	15220	--	--
5	0.27	100, 40	8.04	8.04	0	-11345	23.50	15220	--	--
6	0.33	100, 40	8.04	8.04	0	-11345	15.96	15220	--	--
7	0.40	100, 40	8.04	8.04	0	-11345	11.58	15220	--	--
8	0.47	100, 40	8.04	8.04	0	-11345	8.81	15220	--	--
9	0.53	100, 40	8.04	8.04	0	-11345	6.96	15220	--	--
10	0.60	100, 40	8.04	8.04	0	-11345	5.54	15220	--	--
11	0.67	100, 40	8.04	8.04	0	-11345	4.34	15220	--	--
12	0.73	100, 40	8.04	8.04	0	-11345	3.47	15220	--	--
13	0.80	100, 40	8.04	8.04	0	-11345	2.80	15220	--	--
14	0.84	100, 40	8.04	8.04	0	-11345	2.49	15220	--	--

Armature e tensioni piastre

Combinazione n° 8

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	10.72
2	0.13	2.83	2.83	0	-4090	11.43

3	0.27	2.83	2.83	0	-4090	14.76
4	0.40	2.83	2.83	0	-4090	31.30
5	0.50	2.83	2.83	0	4090	66.61
6	0.63	2.83	2.83	0	4090	14.71
7	0.77	2.83	2.83	0	4090	10.40
8	0.90	2.83	2.83	0	4090	9.55
9	1.03	2.83	2.83	0	4090	10.40
10	1.17	2.83	2.83	0	4090	14.71
11	1.30	2.83	2.83	0	4090	66.61
12	1.40	2.83	2.83	0	-4090	31.30
13	1.53	2.83	2.83	0	-4090	14.76
14	1.67	2.83	2.83	0	-4090	11.43
15	1.80	2.83	2.83	0	-4090	10.72
16	1.93	2.83	2.83	0	-4090	11.43
17	2.07	2.83	2.83	0	-4090	14.76
18	2.20	2.83	2.83	0	-4090	31.30
19	2.30	2.83	2.83	0	4090	66.61
20	2.43	2.83	2.83	0	4090	14.71
21	2.57	2.83	2.83	0	4090	10.40
22	2.70	2.83	2.83	0	4090	9.55
23	2.83	2.83	2.83	0	4090	10.40
24	2.97	2.83	2.83	0	4090	14.71
25	3.10	2.83	2.83	0	4090	66.61
26	3.20	2.83	2.83	0	-4090	31.30
27	3.33	2.83	2.83	0	-4090	14.76
28	3.47	2.83	2.83	0	-4090	11.43
29	3.60	2.83	2.83	0	-4090	10.72
30	3.73	2.83	2.83	0	-4090	11.43
31	3.87	2.83	2.83	0	-4090	14.76
32	4.00	2.83	2.83	0	-4090	31.30
33	4.10	2.83	2.83	0	4090	66.61
34	4.23	2.83	2.83	0	4090	14.71
35	4.37	2.83	2.83	0	4090	10.40
36	4.50	2.83	2.83	0	4090	9.55
37	4.63	2.83	2.83	0	4090	10.40
38	4.77	2.83	2.83	0	4090	14.71
39	4.90	2.83	2.83	0	4090	66.61
40	5.00	2.83	2.83	0	-4090	31.30
41	5.13	2.83	2.83	0	-4090	14.76
42	5.27	2.83	2.83	0	-4090	11.43
43	5.40	2.83	2.83	0	-4090	10.72
44	5.53	2.83	2.83	0	-4090	11.43
45	5.67	2.83	2.83	0	-4090	14.76
46	5.80	2.83	2.83	0	-4090	31.30
47	5.90	2.83	2.83	0	4090	66.61
48	6.03	2.83	2.83	0	4090	14.71
49	6.17	2.83	2.83	0	4090	10.40
50	6.30	2.83	2.83	0	4090	9.55
51	6.43	2.83	2.83	0	4090	10.40
52	6.57	2.83	2.83	0	4090	14.71
53	6.70	2.83	2.83	0	4090	66.61
54	6.80	2.83	2.83	0	-4090	31.30
55	6.93	2.83	2.83	0	-4090	14.76
56	7.07	2.83	2.83	0	-4090	11.43
57	7.20	2.83	2.83	0	-4090	10.72
58	7.33	2.83	2.83	0	-4090	11.43
59	7.47	2.83	2.83	0	-4090	14.76
60	7.60	2.83	2.83	0	-4090	31.30
61	7.70	2.83	2.83	0	4090	66.61
62	7.83	2.83	2.83	0	4090	14.71
63	7.97	2.83	2.83	0	4090	10.40
64	8.10	2.83	2.83	0	4090	9.55
65	8.23	2.83	2.83	0	4090	10.40
66	8.37	2.83	2.83	0	4090	14.71
67	8.50	2.83	2.83	0	4090	66.61
68	8.60	2.83	2.83	0	-4090	31.30
69	8.73	2.83	2.83	0	-4090	14.76
70	8.87	2.83	2.83	0	-4090	11.43
71	9.00	2.83	2.83	0	-4090	10.72
72	9.13	2.83	2.83	0	-4090	11.43
73	9.27	2.83	2.83	0	-4090	14.76
74	9.40	2.83	2.83	0	-4090	31.30
75	9.50	2.83	2.83	0	4090	66.61
76	9.63	2.83	2.83	0	4090	14.71
77	9.77	2.83	2.83	0	4090	10.40
78	9.90	2.83	2.83	0	4090	9.55
79	10.03	2.83	2.83	0	4090	10.40

80	10.17	2.83	2.83	0	4090	14.71
81	10.30	2.83	2.83	0	4090	66.61
82	10.40	2.83	2.83	0	-4090	31.30
83	10.53	2.83	2.83	0	-4090	14.76
84	10.67	2.83	2.83	0	-4090	11.43
85	10.80	2.83	2.83	0	-4090	10.72
86	10.93	2.83	2.83	0	-4090	11.43
87	11.07	2.83	2.83	0	-4090	14.76
88	11.20	2.83	2.83	0	-4090	31.30
89	11.30	2.83	2.83	0	4090	66.61
90	11.43	2.83	2.83	0	4090	14.71
91	11.57	2.83	2.83	0	4090	10.40
92	11.70	2.83	2.83	0	4090	9.55
93	11.83	2.83	2.83	0	4090	10.40
94	11.97	2.83	2.83	0	4090	14.71
95	12.10	2.83	2.83	0	4090	66.61
96	12.20	2.83	2.83	0	-4090	31.30
97	12.33	2.83	2.83	0	-4090	14.76
98	12.47	2.83	2.83	0	-4090	11.43
99	12.60	2.83	2.83	0	-4090	10.72
100	12.73	2.83	2.83	0	-4090	11.43
101	12.87	2.83	2.83	0	-4090	14.76
102	13.00	2.83	2.83	0	-4090	31.30
103	13.10	2.83	2.83	0	4090	66.61
104	13.23	2.83	2.83	0	4090	14.71
105	13.37	2.83	2.83	0	4090	10.40
106	13.50	2.83	2.83	0	4090	9.55
107	13.63	2.83	2.83	0	4090	10.40
108	13.77	2.83	2.83	0	4090	14.71
109	13.90	2.83	2.83	0	4090	66.61
110	14.00	2.83	2.83	0	-4090	31.30
111	14.13	2.83	2.83	0	-4090	14.76
112	14.27	2.83	2.83	0	-4090	11.43
113	14.40	2.83	2.83	0	-4090	10.72
114	14.53	2.83	2.83	0	-4090	11.43
115	14.67	2.83	2.83	0	-4090	14.76
116	14.80	2.83	2.83	0	-4090	31.30
117	14.90	2.83	2.83	0	4090	66.61
118	15.03	2.83	2.83	0	4090	14.71
119	15.17	2.83	2.83	0	4090	10.40
120	15.30	2.83	2.83	0	4090	9.55
121	15.43	2.83	2.83	0	4090	10.40
122	15.57	2.83	2.83	0	4090	14.71
123	15.70	2.83	2.83	0	4090	66.61
124	15.80	2.83	2.83	0	-4090	31.30
125	15.93	2.83	2.83	0	-4090	14.76
126	16.07	2.83	2.83	0	-4090	11.43
127	16.20	2.83	2.83	0	-4090	10.72
128	16.33	2.83	2.83	0	-4090	11.43
129	16.47	2.83	2.83	0	-4090	14.76
130	16.60	2.83	2.83	0	-4090	31.30
131	16.70	2.83	2.83	0	4090	66.61
132	16.83	2.83	2.83	0	4090	14.71
133	16.97	2.83	2.83	0	4090	10.40
134	17.10	2.83	2.83	0	4090	9.55
135	17.23	2.83	2.83	0	4090	10.40
136	17.37	2.83	2.83	0	4090	14.71
137	17.50	2.83	2.83	0	4090	66.61
138	17.60	2.83	2.83	0	-4090	31.30
139	17.73	2.83	2.83	0	-4090	14.76
140	17.87	2.83	2.83	0	-4090	11.43
141	18.00	2.83	2.83	0	-4090	10.72
142	18.13	2.83	2.83	0	-4090	11.43
143	18.27	2.83	2.83	0	-4090	14.76
144	18.40	2.83	2.83	0	-4090	31.30
145	18.50	2.83	2.83	0	4090	66.61
146	18.63	2.83	2.83	0	4090	14.71
147	18.77	2.83	2.83	0	4090	10.40
148	18.90	2.83	2.83	0	4090	9.55
149	19.03	2.83	2.83	0	4090	10.40
150	19.17	2.83	2.83	0	4090	14.71
151	19.30	2.83	2.83	0	4090	66.61
152	19.40	2.83	2.83	0	-4090	31.30
153	19.53	2.83	2.83	0	-4090	14.76
154	19.67	2.83	2.83	0	-4090	11.43
155	19.80	2.83	2.83	0	-4090	10.72
156	19.93	2.83	2.83	0	-4090	11.43

157	20.07	2.83	2.83	0	-4090	14.76
158	20.20	2.83	2.83	0	-4090	31.30
159	20.30	2.83	2.83	0	4090	66.61
160	20.43	2.83	2.83	0	4090	14.71
161	20.57	2.83	2.83	0	4090	10.40
162	20.70	2.83	2.83	0	4090	9.55
163	20.83	2.83	2.83	0	4090	10.40
164	20.97	2.83	2.83	0	4090	14.71
165	21.10	2.83	2.83	0	4090	66.61
166	21.20	2.83	2.83	0	-4090	31.30
167	21.33	2.83	2.83	0	-4090	14.76
168	21.47	2.83	2.83	0	-4090	11.43
169	21.60	2.83	2.83	0	-4090	10.72
170	21.73	2.83	2.83	0	-4090	11.43
171	21.87	2.83	2.83	0	-4090	14.76
172	22.00	2.83	2.83	0	-4090	31.31
173	22.10	2.83	2.83	0	4090	66.59
174	22.23	2.83	2.83	0	4090	14.71
175	22.37	2.83	2.83	0	4090	10.40
176	22.50	2.83	2.83	0	4090	9.55
177	22.63	2.83	2.83	0	4090	10.40
178	22.77	2.83	2.83	0	4090	14.71
179	22.90	2.83	2.83	0	4090	66.55
180	23.00	2.83	2.83	0	-4090	31.32
181	23.13	2.83	2.83	0	-4090	14.76
182	23.27	2.83	2.83	0	-4090	11.44
183	23.40	2.83	2.83	0	-4090	10.73
184	23.53	2.83	2.83	0	-4090	11.44
185	23.67	2.83	2.83	0	-4090	14.77
186	23.80	2.83	2.83	0	-4090	31.36
187	23.90	2.83	2.83	0	4090	66.36
188	24.03	2.83	2.83	0	4090	14.69
189	24.17	2.83	2.83	0	4090	10.39
190	24.30	2.83	2.83	0	4090	9.54
191	24.43	2.83	2.83	0	4090	10.38
192	24.57	2.83	2.83	0	4090	14.67
193	24.70	2.83	2.83	0	4090	65.82
194	24.80	2.83	2.83	0	-4090	31.55
195	24.93	2.83	2.83	0	-4090	14.82
196	25.07	2.83	2.83	0	-4090	11.48
197	25.20	2.83	2.83	0	-4090	10.77
198	25.33	2.83	2.83	0	-4090	11.50
199	25.47	2.83	2.83	0	-4090	14.89
200	25.60	2.83	2.83	0	-4090	32.06
201	25.70	2.83	2.83	0	4090	63.43
202	25.83	2.83	2.83	0	4090	14.49
203	25.97	2.83	2.83	0	4090	10.26
204	26.10	2.83	2.83	0	4090	9.41
205	26.23	2.83	2.83	0	4090	10.20
206	26.37	2.83	2.83	0	4090	14.25
207	26.50	2.83	2.83	0	4090	57.39
208	26.60	2.83	2.83	0	-4090	34.87
209	26.73	2.83	2.83	0	-4090	15.65
210	26.87	2.83	2.83	0	-4090	12.08
211	27.00	2.83	2.83	0	-4090	11.40
212	27.13	2.83	2.83	0	-4090	12.39
213	27.27	2.83	2.83	0	-4090	16.82
214	27.40	2.83	2.83	0	-4090	46.34
215	27.50	2.83	2.83	0	4090	38.26
216	27.63	2.83	2.83	0	4090	12.12
217	27.77	2.83	2.83	0	4090	8.79
218	27.90	2.83	2.83	0	4090	7.94
219	28.03	2.83	2.83	0	4090	8.25
220	28.17	2.83	2.83	0	4090	10.22
221	28.30	2.83	2.83	0	4090	20.39
222	28.40	2.83	2.83	0	-4090	108.95
223	28.53	2.83	2.83	0	-4090	40.22
224	28.67	2.83	2.83	0	-4090	23.60
225	28.80	2.83	2.83	0	-4090	20.21
226	28.93	2.83	2.83	0	-4090	19.91
227	29.07	2.83	2.83	0	-4090	21.14
228	29.20	2.83	2.83	0	-4090	23.51
229	29.33	2.83	2.83	0	-4090	26.93
230	29.47	2.83	2.83	0	-4090	31.87
231	29.60	2.83	2.83	0	4090	39.21
232	29.73	2.83	2.83	0	4090	51.50
233	29.87	2.83	2.83	0	4090	71.12

234 30.00 2.83 2.83 0 4090 251.51

Piastra fondazione valle

Nr.	X	A _R	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	2.98
2	0.13	2.83	2.83	0	-4090	3.19
3	0.27	2.83	2.83	0	-4090	4.36
4	0.40	2.83	2.83	0	-4090	22.37
5	0.50	2.83	2.83	0	4090	8.37
6	0.63	2.83	2.83	0	4090	4.40
7	0.77	2.83	2.83	0	4090	3.63
8	0.90	2.83	2.83	0	4090	3.48
9	1.03	2.83	2.83	0	4090	3.63
10	1.17	2.83	2.83	0	4090	4.40
11	1.30	2.83	2.83	0	4090	8.37
12	1.40	2.83	2.83	0	-4090	22.37
13	1.53	2.83	2.83	0	-4090	4.36
14	1.67	2.83	2.83	0	-4090	3.19
15	1.80	2.83	2.83	0	-4090	2.98
16	1.93	2.83	2.83	0	-4090	3.19
17	2.07	2.83	2.83	0	-4090	4.36
18	2.20	2.83	2.83	0	-4090	22.37
19	2.30	2.83	2.83	0	4090	8.37
20	2.43	2.83	2.83	0	4090	4.40
21	2.57	2.83	2.83	0	4090	3.63
22	2.70	2.83	2.83	0	4090	3.48
23	2.83	2.83	2.83	0	4090	3.63
24	2.97	2.83	2.83	0	4090	4.40
25	3.10	2.83	2.83	0	4090	8.37
26	3.20	2.83	2.83	0	-4090	22.37
27	3.33	2.83	2.83	0	-4090	4.36
28	3.47	2.83	2.83	0	-4090	3.19
29	3.60	2.83	2.83	0	-4090	2.98
30	3.73	2.83	2.83	0	-4090	3.19
31	3.87	2.83	2.83	0	-4090	4.36
32	4.00	2.83	2.83	0	-4090	22.37
33	4.10	2.83	2.83	0	4090	8.37
34	4.23	2.83	2.83	0	4090	4.40
35	4.37	2.83	2.83	0	4090	3.63
36	4.50	2.83	2.83	0	4090	3.48
37	4.63	2.83	2.83	0	4090	3.63
38	4.77	2.83	2.83	0	4090	4.40
39	4.90	2.83	2.83	0	4090	8.37
40	5.00	2.83	2.83	0	-4090	22.37
41	5.13	2.83	2.83	0	-4090	4.36
42	5.27	2.83	2.83	0	-4090	3.19
43	5.40	2.83	2.83	0	-4090	2.98
44	5.53	2.83	2.83	0	-4090	3.19
45	5.67	2.83	2.83	0	-4090	4.36
46	5.80	2.83	2.83	0	-4090	22.37
47	5.90	2.83	2.83	0	4090	8.37
48	6.03	2.83	2.83	0	4090	4.40
49	6.17	2.83	2.83	0	4090	3.63
50	6.30	2.83	2.83	0	4090	3.48
51	6.43	2.83	2.83	0	4090	3.63
52	6.57	2.83	2.83	0	4090	4.40
53	6.70	2.83	2.83	0	4090	8.37
54	6.80	2.83	2.83	0	-4090	22.37
55	6.93	2.83	2.83	0	-4090	4.36
56	7.07	2.83	2.83	0	-4090	3.19
57	7.20	2.83	2.83	0	-4090	2.98
58	7.33	2.83	2.83	0	-4090	3.19
59	7.47	2.83	2.83	0	-4090	4.36
60	7.60	2.83	2.83	0	-4090	22.37
61	7.70	2.83	2.83	0	4090	8.37
62	7.83	2.83	2.83	0	4090	4.40
63	7.97	2.83	2.83	0	4090	3.63
64	8.10	2.83	2.83	0	4090	3.48
65	8.23	2.83	2.83	0	4090	3.63
66	8.37	2.83	2.83	0	4090	4.40
67	8.50	2.83	2.83	0	4090	8.37
68	8.60	2.83	2.83	0	-4090	22.37
69	8.73	2.83	2.83	0	-4090	4.36
70	8.87	2.83	2.83	0	-4090	3.19
71	9.00	2.83	2.83	0	-4090	2.98
72	9.13	2.83	2.83	0	-4090	3.19

73	9.27	2.83	2.83	0	-4090	4.36
74	9.40	2.83	2.83	0	-4090	22.37
75	9.50	2.83	2.83	0	4090	8.37
76	9.63	2.83	2.83	0	4090	4.40
77	9.77	2.83	2.83	0	4090	3.63
78	9.90	2.83	2.83	0	4090	3.48
79	10.03	2.83	2.83	0	4090	3.63
80	10.17	2.83	2.83	0	4090	4.40
81	10.30	2.83	2.83	0	4090	8.37
82	10.40	2.83	2.83	0	-4090	22.37
83	10.53	2.83	2.83	0	-4090	4.36
84	10.67	2.83	2.83	0	-4090	3.19
85	10.80	2.83	2.83	0	-4090	2.98
86	10.93	2.83	2.83	0	-4090	3.19
87	11.07	2.83	2.83	0	-4090	4.36
88	11.20	2.83	2.83	0	-4090	22.37
89	11.30	2.83	2.83	0	4090	8.37
90	11.43	2.83	2.83	0	4090	4.40
91	11.57	2.83	2.83	0	4090	3.63
92	11.70	2.83	2.83	0	4090	3.48
93	11.83	2.83	2.83	0	4090	3.63
94	11.97	2.83	2.83	0	4090	4.40
95	12.10	2.83	2.83	0	4090	8.37
96	12.20	2.83	2.83	0	-4090	22.37
97	12.33	2.83	2.83	0	-4090	4.36
98	12.47	2.83	2.83	0	-4090	3.19
99	12.60	2.83	2.83	0	-4090	2.98
100	12.73	2.83	2.83	0	-4090	3.19
101	12.87	2.83	2.83	0	-4090	4.36
102	13.00	2.83	2.83	0	-4090	22.37
103	13.10	2.83	2.83	0	4090	8.37
104	13.23	2.83	2.83	0	4090	4.40
105	13.37	2.83	2.83	0	4090	3.63
106	13.50	2.83	2.83	0	4090	3.48
107	13.63	2.83	2.83	0	4090	3.63
108	13.77	2.83	2.83	0	4090	4.40
109	13.90	2.83	2.83	0	4090	8.37
110	14.00	2.83	2.83	0	-4090	22.37
111	14.13	2.83	2.83	0	-4090	4.36
112	14.27	2.83	2.83	0	-4090	3.19
113	14.40	2.83	2.83	0	-4090	2.98
114	14.53	2.83	2.83	0	-4090	3.19
115	14.67	2.83	2.83	0	-4090	4.36
116	14.80	2.83	2.83	0	-4090	22.37
117	14.90	2.83	2.83	0	4090	8.37
118	15.03	2.83	2.83	0	4090	4.40
119	15.17	2.83	2.83	0	4090	3.63
120	15.30	2.83	2.83	0	4090	3.48
121	15.43	2.83	2.83	0	4090	3.63
122	15.57	2.83	2.83	0	4090	4.40
123	15.70	2.83	2.83	0	4090	8.37
124	15.80	2.83	2.83	0	-4090	22.37
125	15.93	2.83	2.83	0	-4090	4.36
126	16.07	2.83	2.83	0	-4090	3.19
127	16.20	2.83	2.83	0	-4090	2.98
128	16.33	2.83	2.83	0	-4090	3.19
129	16.47	2.83	2.83	0	-4090	4.36
130	16.60	2.83	2.83	0	-4090	22.37
131	16.70	2.83	2.83	0	4090	8.37
132	16.83	2.83	2.83	0	4090	4.40
133	16.97	2.83	2.83	0	4090	3.63
134	17.10	2.83	2.83	0	4090	3.48
135	17.23	2.83	2.83	0	4090	3.63
136	17.37	2.83	2.83	0	4090	4.40
137	17.50	2.83	2.83	0	4090	8.37
138	17.60	2.83	2.83	0	-4090	22.37
139	17.73	2.83	2.83	0	-4090	4.36
140	17.87	2.83	2.83	0	-4090	3.19
141	18.00	2.83	2.83	0	-4090	2.98
142	18.13	2.83	2.83	0	-4090	3.19
143	18.27	2.83	2.83	0	-4090	4.36
144	18.40	2.83	2.83	0	-4090	22.37
145	18.50	2.83	2.83	0	4090	8.37
146	18.63	2.83	2.83	0	4090	4.40
147	18.77	2.83	2.83	0	4090	3.63
148	18.90	2.83	2.83	0	4090	3.48
149	19.03	2.83	2.83	0	4090	3.63

150	19.17	2.83	2.83	0	4090	4.40
151	19.30	2.83	2.83	0	4090	8.37
152	19.40	2.83	2.83	0	-4090	22.37
153	19.53	2.83	2.83	0	-4090	4.36
154	19.67	2.83	2.83	0	-4090	3.19
155	19.80	2.83	2.83	0	-4090	2.98
156	19.93	2.83	2.83	0	-4090	3.19
157	20.07	2.83	2.83	0	-4090	4.36
158	20.20	2.83	2.83	0	-4090	22.37
159	20.30	2.83	2.83	0	4090	8.37
160	20.43	2.83	2.83	0	4090	4.40
161	20.57	2.83	2.83	0	4090	3.63
162	20.70	2.83	2.83	0	4090	3.48
163	20.83	2.83	2.83	0	4090	3.63
164	20.97	2.83	2.83	0	4090	4.40
165	21.10	2.83	2.83	0	4090	8.37
166	21.20	2.83	2.83	0	-4090	22.37
167	21.33	2.83	2.83	0	-4090	4.36
168	21.47	2.83	2.83	0	-4090	3.19
169	21.60	2.83	2.83	0	-4090	2.98
170	21.73	2.83	2.83	0	-4090	3.19
171	21.87	2.83	2.83	0	-4090	4.36
172	22.00	2.83	2.83	0	-4090	22.37
173	22.10	2.83	2.83	0	4090	8.37
174	22.23	2.83	2.83	0	4090	4.40
175	22.37	2.83	2.83	0	4090	3.63
176	22.50	2.83	2.83	0	4090	3.48
177	22.63	2.83	2.83	0	4090	3.63
178	22.77	2.83	2.83	0	4090	4.40
179	22.90	2.83	2.83	0	4090	8.37
180	23.00	2.83	2.83	0	-4090	22.37
181	23.13	2.83	2.83	0	-4090	4.36
182	23.27	2.83	2.83	0	-4090	3.19
183	23.40	2.83	2.83	0	-4090	2.98
184	23.53	2.83	2.83	0	-4090	3.19
185	23.67	2.83	2.83	0	-4090	4.36
186	23.80	2.83	2.83	0	-4090	22.37
187	23.90	2.83	2.83	0	4090	8.37
188	24.03	2.83	2.83	0	4090	4.40
189	24.17	2.83	2.83	0	4090	3.63
190	24.30	2.83	2.83	0	4090	3.48
191	24.43	2.83	2.83	0	4090	3.63
192	24.57	2.83	2.83	0	4090	4.40
193	24.70	2.83	2.83	0	4090	8.37
194	24.80	2.83	2.83	0	-4090	22.37
195	24.93	2.83	2.83	0	-4090	4.36
196	25.07	2.83	2.83	0	-4090	3.19
197	25.20	2.83	2.83	0	-4090	2.98
198	25.33	2.83	2.83	0	-4090	3.19
199	25.47	2.83	2.83	0	-4090	4.36
200	25.60	2.83	2.83	0	-4090	22.36
201	25.70	2.83	2.83	0	4090	8.38
202	25.83	2.83	2.83	0	4090	4.40
203	25.97	2.83	2.83	0	4090	3.63
204	26.10	2.83	2.83	0	4090	3.48
205	26.23	2.83	2.83	0	4090	3.63
206	26.37	2.83	2.83	0	4090	4.40
207	26.50	2.83	2.83	0	4090	8.39
208	26.60	2.83	2.83	0	-4090	22.25
209	26.73	2.83	2.83	0	-4090	4.36
210	26.87	2.83	2.83	0	-4090	3.18
211	27.00	2.83	2.83	0	-4090	2.97
212	27.13	2.83	2.83	0	-4090	3.18
213	27.27	2.83	2.83	0	-4090	4.34
214	27.40	2.83	2.83	0	-4090	21.83
215	27.50	2.83	2.83	0	4090	8.50
216	27.63	2.83	2.83	0	4090	4.44
217	27.77	2.83	2.83	0	4090	3.66
218	27.90	2.83	2.83	0	4090	3.52
219	28.03	2.83	2.83	0	4090	3.69
220	28.17	2.83	2.83	0	4090	4.51
221	28.30	2.83	2.83	0	4090	8.95
222	28.40	2.83	2.83	0	-4090	19.10
223	28.53	2.83	2.83	0	-4090	4.14
224	28.67	2.83	2.83	0	-4090	3.03
225	28.80	2.83	2.83	0	-4090	2.80
226	28.93	2.83	2.83	0	-4090	2.93

227	29.07	2.83	2.83	0	-4090	3.75
228	29.20	2.83	2.83	0	-4090	10.58
229	29.33	2.83	2.83	0	4090	11.90
230	29.47	2.83	2.83	0	4090	6.53
231	29.60	2.83	2.83	0	4090	6.01
232	29.73	2.83	2.83	0	4090	6.77
233	29.87	2.83	2.83	0	4090	8.56
234	30.00	2.83	2.83	0	-4090	78.19

Analisi dei pali

Combinazione n° 8

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	12368.6
Verticale	[kg]	11911.2
Momento	[kgm]	-11110.8

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.39366
Verticale	[cm]	0.00599
Rotazione	[°]	-0.01076

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]	Tr [kg]	Mr [kgm]
1	32	-7783	11417	0	37189	0
2	33	29203	11417	0	37189	0

Dettagli calcolo della portanza

τ_m	tensione tangenziale media palo-terreno in [kg/cm ²]
σ_p	tensione sul terreno alla punta del palo in [kg/cm ²]
N_c, N_q, N_γ	fattori di capacità portante
N'_c, N'_q, N'_γ	fattori di capacità portante corretti
P_1	portanza caratteristica per attrito e aderenza laterale in [kg]
P_p	portanza caratteristica di punta in [kg]
P_d	portanza di progetto, in [kg]
W_p	peso del palo, in [kg]
T_d	portanza trasversale di progetto, espresso in [kg]
PT	Parametri Terreno utilizzati

Fila	N_c	N'_c	N_q	N'_q	N_γ	N'_γ	τ_m	σ_p
1	23.36	23.36	11.40	11.40	6.91	6.91	-0.08	1.89
2	23.36	23.36	11.40	11.40	6.91	6.91	-0.02	6.90

Fila	P_1	P_p	W_p	P_d	PT
1	7156	77070	11310	51504	MEDI
1	7156	77070	11310	51504	MINIMI
2	7156	77070	11310	52001	MEDI
2	7156	77070	11310	52001	MINIMI

Verifica della portanza

N	carico verticale in testa al palo in [kg]
P_d	portanza di progetto in [kg]
FS_v	fattori di sicurezza a carichi verticali (rapporto tra P_d/N)
T	carico orizzontale in testa al palo in [kg]
T_d	portanza trasversale di progetto in [kg]
FS_o	fattori di sicurezza a carichi orizzontali (rapporto tra T_d/T)

Fila	N	P_d	FS_v	T	T_d	FS_o
1	-7783	51504	6.618	11417	28607	2.506
2	29203	52001	1.781	11417	28607	2.506

Verifica a punzonamento della fondazione

D	diámetro dei pali della fila espresso in [cm]
H _f	altezza della fondazione in corrispondenza della fila espressa in [cm]
S _i	superficie di aderenza palo-fondazione (H _f l ₁ D) espressa in [cmq]
N	sforzo normale trasmesso dal palo alla fondazione espresso in [kg]
τ _c	tensione tangenziale palo-fondazione espressa in [kg/cmq]

Fila	D	H _f	S _i	N	τ _c
1	80.0	40.0	10053.1	-7783	-0.77
2	80.0	40.0	10053.1	29203	2.90

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 8

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
M _u	momento ultimo espresso in [kgm]
N _u	sforzo normale ultimo espresso in [kg]
T _u	taglio ultimo espresso in [kg]
CS	coefficiente di sicurezza

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	-7783	11417	52.28	0	-208559	55705	4.88
2	0.23	-2569	-7492	11350	52.28	33858	-98749	55705	4.91
3	0.45	-5123	-7187	11288	52.28	44889	-62975	55705	4.94
4	0.68	-7662	-6866	11230	52.28	50385	-45147	55705	4.96
5	0.90	-10189	-6527	9228	52.28	53699	-34399	55705	5.27
6	1.13	-12265	-6172	7406	52.28	55669	-28012	55705	4.54
7	1.35	-13932	-5800	5758	52.28	56990	-23726	55705	4.09
8	1.57	-15227	-5412	4277	52.28	57955	-20597	55705	3.81
9	1.80	-16190	-5007	2953	52.28	58707	-18157	55705	3.63
10	2.02	-16854	-4586	1779	52.28	59328	-16144	55705	3.52
11	2.25	-17254	-4149	744	52.28	59867	-14395	55705	3.47
12	2.48	-17422	-3695	-161	52.28	60359	-12802	55705	3.46
13	2.70	-17385	-3225	-944	52.28	60827	-11282	55705	3.50
14	2.93	-17173	-2738	-1617	52.28	61293	-9773	55705	3.57
15	3.15	-16809	-2235	-2187	52.28	61773	-8214	55705	3.67
16	3.38	-16317	-1716	-2666	52.28	62287	-6549	55705	3.82
17	3.60	-15717	-1180	-3060	52.28	62851	-4717	55705	4.00
18	3.83	-15029	-627	-3380	52.28	63489	-2650	55705	4.22
19	4.05	-14268	-59	-3633	52.28	64225	-264	55705	4.50
20	4.28	-13451	527	-3827	52.28	64872	2540	55705	4.82
21	4.50	-12590	1128	-3970	52.28	65617	5880	55705	5.21
22	4.73	-11697	1746	-4068	52.28	66520	9930	55705	5.69
23	4.95	-10781	2380	-4128	52.28	67635	14933	55705	6.27
24	5.17	-9853	3031	-4156	52.28	69042	21241	55705	7.01
25	5.40	-8918	3698	-4157	52.28	70858	29387	55705	7.95
26	5.63	-7982	4382	-4136	52.28	73275	40226	55705	9.18
27	5.85	-7052	5082	-4098	52.28	76437	55088	55705	10.84
28	6.08	-6130	5799	-4046	52.28	80370	76030	55705	13.11
29	6.30	-5219	6131	-3770	52.28	84335	99061	55705	14.78
30	6.53	-4371	6413	-3460	52.28	88915	130459	55705	16.10
31	6.75	-3592	6696	-3129	52.28	94668	176455	55705	17.80
32	6.98	-2888	6979	-2785	52.28	99971	241550	55705	20.00
33	7.20	-2262	7262	-2435	52.28	102179	328057	55705	22.88
34	7.42	-1714	7544	-2084	52.28	97159	427669	55705	26.73
35	7.65	-1245	7827	-1738	52.28	85262	536022	55705	32.06
36	7.88	-854	8110	-1398	52.28	68273	648311	55705	39.84
37	8.10	-539	8393	-1068	52.28	48024	747112	55705	52.17
38	8.33	-299	8675	-748	52.28	26627	771995	55705	74.48
39	8.55	-131	8958	-439	52.28	11411	780646	55705	87.14
40	8.78	-32	9241	-143	52.28	2727	785583	55705	85.01
41	9.00	0	9524	-143	52.28	0	787133	55705	82.65

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	29203	11417	52.28	0	787133	55705	4.88
2	0.23	-2569	29479	11350	52.28	60197	690784	55705	4.91

3	0.45	-5123	29739	11288	52.28	88210	512106	55705	4.94
4	0.68	-7662	29985	11230	52.28	100069	391599	55705	4.96
5	0.90	-10189	30213	9228	52.28	102132	302844	55705	6.04
6	1.13	-12265	30425	7406	52.28	100363	248954	55705	7.52
7	1.35	-13932	30621	5758	52.28	98256	215957	55705	7.05
8	1.57	-15227	30801	4277	52.28	96451	195092	55705	6.33
9	1.80	-16190	30964	2953	52.28	95230	182138	55705	5.88
10	2.02	-16854	31112	1779	52.28	94418	174293	55705	5.60
11	2.25	-17254	31244	744	52.28	93934	170095	55705	5.44
12	2.48	-17422	31360	-161	52.28	93787	168821	55705	5.38
13	2.70	-17385	31460	-944	52.28	93916	169945	55705	5.40
14	2.93	-17173	31543	-1617	52.28	94291	173194	55705	5.49
15	3.15	-16809	31611	-2187	52.28	94881	178431	55705	5.64
16	3.38	-16317	31663	-2666	52.28	95536	185386	55705	5.85
17	3.60	-15717	31699	-3060	52.28	96384	194388	55705	6.13
18	3.83	-15029	31718	-3380	52.28	97408	205581	55705	6.48
19	4.05	-14268	31722	-3633	52.28	98504	218999	55705	6.90
20	4.28	-13451	31710	-3827	52.28	99616	234837	55705	7.41
21	4.50	-12590	31681	-3970	52.28	100582	253106	55705	7.99
22	4.73	-11697	31637	-4068	52.28	101434	274355	55705	8.67
23	4.95	-10781	31577	-4128	52.28	102047	298873	55705	9.47
24	5.17	-9853	31500	-4156	52.28	102179	326675	55705	10.37
25	5.40	-8918	31408	-4157	52.28	101646	357991	55705	11.40
26	5.63	-7982	31299	-4136	52.28	100027	392210	55705	12.53
27	5.85	-7052	31175	-4098	52.28	97040	429000	55705	13.59
28	6.08	-6130	31034	-4046	52.28	92896	470330	55705	13.77
29	6.30	-5219	31269	-3770	52.28	87055	521558	55705	14.78
30	6.53	-4371	31552	-3460	52.28	79812	576114	55705	16.10
31	6.75	-3592	31835	-3129	52.28	71242	631320	55705	17.80
32	6.98	-2888	32117	-2785	52.28	61532	684211	55705	20.00
33	7.20	-2262	32400	-2435	52.28	51183	733212	55705	22.63
34	7.42	-1714	32683	-2084	52.28	40083	764345	55705	23.39
35	7.65	-1245	32965	-1738	52.28	29103	770588	55705	23.38
36	7.88	-854	33248	-1398	52.28	19928	775804	55705	23.33
37	8.10	-539	33531	-1068	52.28	12549	779999	55705	23.26
38	8.33	-299	33814	-748	52.28	6931	783193	55705	23.16
39	8.55	-131	34096	-439	52.28	3016	785419	55705	23.04
40	8.78	-32	34379	-143	52.28	734	786716	55705	22.88
41	9.00	0	34662	-143	52.28	0	787133	55705	22.71

COMBINAZIONE n° 9

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		

Incremento sismico della spinta	4012.63	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	25.24	[°]		

Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	-551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	-539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	11633.71	[kg]		
Risultante dei carichi applicati in dir. verticale	9546.26	[kg]		
Momento ribaltante rispetto allo spigolo a valle	16026.93	[kgm]		
Momento stabilizzante rispetto allo spigolo a valle	14353.63	[kgm]		
Sforzo normale sul piano di posa della fondazione	9546.26	[kg]		
Sforzo tangenziale sul piano di posa della fondazione	11633.71	[kg]		
Eccentricità rispetto al baricentro della fondazione	1.13	[m]		
Lunghezza fondazione reagente	-0.53	[m]		
Risultante in fondazione	15049.07	[kg]		
Inclinazione della risultante (rispetto alla normale)	50.63	[°]		
Momento rispetto al baricentro della fondazione	10747.12	[kgm]		

COEFFICIENTI DI SICUREZZA

COMBINAZIONE n° 10

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	4770.00	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	30.61	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	12368.59	[kg]
Risultante dei carichi applicati in dir. verticale	11911.18	[kg]
Momento ribaltante rispetto allo spigolo a valle	15791.78	[kgm]
Momento stabilizzante rispetto allo spigolo a valle	16002.66	[kgm]
Sforzo normale sul piano di posa della fondazione	11911.18	[kg]
Sforzo tangenziale sul piano di posa della fondazione	12368.59	[kg]
Eccentricità rispetto al baricentro della fondazione	0.93	[m]
Lunghezza fondazione reagente	0.05	[m]
Risultante in fondazione	17171.44	[kg]
Inclinazione della risultante (rispetto alla normale)	46.08	[°]
Momento rispetto al baricentro della fondazione	11110.82	[kgm]

COEFFICIENTI DI SICUREZZA

Stabilità globale muro + terreno

Combinazione n° 11

Le ascisse X sono considerate positive verso monte

Le ordinate Y sono considerate positive verso l'alto

Origine in testa al muro (spigolo contro terra)

W	peso della striscia espresso in [kg]
α	angolo fra la base della striscia e l'orizzontale espresso in [°] (positivo antiorario)
ϕ	angolo d'attrito del terreno lungo la base della striscia
c	coesione del terreno lungo la base della striscia espressa in [kg/cmq]
b	larghezza della striscia espressa in [m]
u	pressione neutra lungo la base della striscia espressa in [kg/cmq]
Ctn, Ctt	contributo tiranti espresso in [kg]

Metodo di Fellenius

Numero di cerchi analizzati 36

Numero di strisce 25

Cerchio critico

Coordinate del centro X[m]= -2.10 Y[m]= 2.10

Raggio del cerchio R[m]= 14.23

Ascissa a valle del cerchio Xi[m]= -15.58

Ascissa a monte del cerchio Xs[m]= 11.98

Larghezza della striscia dx[m]= 1.10

Coefficiente di sicurezza C= 2.36

Le strisce sono numerate da monte verso valle

Caratteristiche delle strisce

Striscia	W	$\alpha(^{\circ})$	Wsin α	b/cos α	ϕ	c	u	Ctn	Ctt
1	4014.14	73.55	3849.91	3.89	21.04	0.01	0.00	---	---
2	10243.84	61.18	8974.70	2.29	22.00	0.15	0.00	---	---
3	14058.44	52.89	11211.10	1.83	22.00	0.15	0.00	---	---
4	16923.62	46.01	12176.25	1.59	22.00	0.15	0.00	---	---
5	20269.21	39.92	13007.26	1.44	22.56	0.16	0.00	---	---
6	23321.36	34.34	13154.90	1.34	24.00	0.20	0.00	---	---
7	24903.54	29.11	12114.86	1.26	24.00	0.20	0.00	---	---
8	26185.79	24.14	10707.51	1.21	24.00	0.20	0.00	---	---
9	27205.69	19.35	9014.87	1.17	24.00	0.20	0.00	---	---
10	27899.03	14.70	7081.54	1.14	24.00	0.20	0.00	---	---
11	26721.77	10.15	4711.15	1.12	24.00	0.20	0.00	---	---
12	22827.70	5.67	2255.05	1.11	24.00	0.20	0.00	---	---
13	21482.20	1.22	456.93	1.10	24.00	0.20	0.00	---	---
14	21437.47	-3.22	-1205.74	1.10	24.00	0.20	0.00	---	---
15	21193.35	-7.69	-2834.84	1.11	24.00	0.20	0.00	---	---
16	20745.29	-12.20	-4383.09	1.13	24.00	0.20	0.00	---	---
17	20084.53	-16.79	-5800.58	1.15	24.00	0.20	0.00	---	---
18	19197.20	-21.49	-7032.81	1.18	24.00	0.20	0.00	---	---
19	18062.69	-26.35	-8018.02	1.23	24.00	0.20	0.00	---	---
20	16650.71	-31.43	-8682.99	1.29	24.00	0.20	0.00	---	---
21	14917.26	-36.81	-8936.92	1.38	23.68	0.19	0.00	---	---
22	12858.77	-42.59	-8702.71	1.50	22.00	0.15	0.00	---	---
23	10343.88	-48.99	-7805.77	1.68	22.00	0.15	0.00	---	---
24	7117.92	-56.39	-5927.86	1.99	22.00	0.15	0.00	---	---
25	2596.41	-65.83	-2368.74	2.69	21.54	0.08	0.00	---	---

 $\Sigma W_i = 451261.83$ [kg] $\Sigma W_i \sin \alpha_i = 37015.96$ [kg] $\Sigma W_i \cos \alpha_i \tan \phi_i = 172567.78$ [kg] $\Sigma c_i b_i / \cos \alpha_i = 58989.14$ [kg]

Stabilità globale muro + terreno

Combinazione n° 12

Le ascisse X sono considerate positive verso monte

Le ordinate Y sono considerate positive verso l'alto

Origine in testa al muro (spigolo contro terra)

W	peso della striscia espresso in [kg]
α	angolo fra la base della striscia e l'orizzontale espresso in [°] (positivo antiorario)
ϕ	angolo d'attrito del terreno lungo la base della striscia
c	coesione del terreno lungo la base della striscia espressa in [kg/cmq]
b	larghezza della striscia espressa in [m]
u	pressione neutra lungo la base della striscia espressa in [kg/cmq]
Ctn, Ctt	contributo tiranti espresso in [kg]

Metodo di Fellenius

Numero di cerchi analizzati 36

Numero di strisce 25

Cerchio critico

Coordinate del centro X[m]= -2.10 Y[m]= 2.10

Raggio del cerchio R[m]= 14.23

Ascissa a valle del cerchio Xi[m]= -15.58

Ascissa a monte del cerchio Xs[m]= 11.98

Larghezza della striscia dx[m]= 1.10

Coefficiente di sicurezza C= 2.13

Le strisce sono numerate da monte verso valle

Caratteristiche delle strisce

Striscia	W	$\alpha(^{\circ})$	$W\sin\alpha$	$b/\cos\alpha$	ϕ	c	u	Ctn	Ctt
1	4014.14	73.55	3849.91	3.89	21.04	0.01	0.00	---	---
2	10243.84	61.18	8974.70	2.29	22.00	0.15	0.00	---	---
3	14058.44	52.89	11211.10	1.83	22.00	0.15	0.00	---	---
4	16923.62	46.01	12176.25	1.59	22.00	0.15	0.00	---	---
5	20269.21	39.92	13007.26	1.44	22.56	0.16	0.00	---	---
6	23321.36	34.34	13154.90	1.34	24.00	0.20	0.00	---	---
7	24903.54	29.11	12114.86	1.26	24.00	0.20	0.00	---	---
8	26185.79	24.14	10707.51	1.21	24.00	0.20	0.00	---	---
9	27205.69	19.35	9014.87	1.17	24.00	0.20	0.00	---	---
10	27899.03	14.70	7081.54	1.14	24.00	0.20	0.00	---	---
11	26721.77	10.15	4711.15	1.12	24.00	0.20	0.00	---	---
12	22827.70	5.67	2255.05	1.11	24.00	0.20	0.00	---	---
13	21482.20	1.22	456.93	1.10	24.00	0.20	0.00	---	---
14	21437.47	-3.22	-1205.74	1.10	24.00	0.20	0.00	---	---
15	21193.35	-7.69	-2834.84	1.11	24.00	0.20	0.00	---	---
16	20745.29	-12.20	-4383.09	1.13	24.00	0.20	0.00	---	---
17	20084.53	-16.79	-5800.58	1.15	24.00	0.20	0.00	---	---
18	19197.20	-21.49	-7032.81	1.18	24.00	0.20	0.00	---	---
19	18062.69	-26.35	-8018.02	1.23	24.00	0.20	0.00	---	---
20	16650.71	-31.43	-8682.99	1.29	24.00	0.20	0.00	---	---
21	14917.26	-36.81	-8936.92	1.38	23.68	0.19	0.00	---	---
22	12858.77	-42.59	-8702.71	1.50	22.00	0.15	0.00	---	---
23	10343.88	-48.99	-7805.77	1.68	22.00	0.15	0.00	---	---
24	7117.92	-56.39	-5927.86	1.99	22.00	0.15	0.00	---	---
25	2596.41	-65.83	-2368.74	2.69	21.54	0.08	0.00	---	---

$\Sigma W_i = 451261.83$ [kg]

$\Sigma W_i \sin \alpha_i = 37015.96$ [kg]

$\Sigma W_i \cos \alpha_i \tan \phi_i = 172567.78$ [kg]

$\Sigma c_i b_i / \cos \alpha_i = 58989.14$ [kg]

COMBINAZIONE n° 13

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	4770.00	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	30.61	[°]		

Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	12368.59	[kg]		
Risultante dei carichi applicati in dir. verticale	11911.18	[kg]		
Sforzo normale sul piano di posa della fondazione	11911.18	[kg]		
Sforzo tangenziale sul piano di posa della fondazione	12368.59	[kg]		
Eccentricità rispetto al baricentro della fondazione	0.93	[m]		
Lunghezza fondazione reagente	0.05	[m]		
Risultante in fondazione	17171.44	[kg]		
Inclinazione della risultante (rispetto alla normale)	46.08	[°]		
Momento rispetto al baricentro della fondazione	11110.82	[kgm]		

Sollecitazioni paramento

Combinazione n° 13

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	13.56	221.53
3	0.25	191.59	55.30	456.05
4	0.38	290.45	126.85	703.56
5	0.50	391.36	229.84	964.41
6	0.63	494.32	366.61	1254.78
7	0.75	599.32	542.22	1590.03
8	0.88	706.36	761.17	1950.71
9	1.00	815.45	1026.06	2330.53
10	1.13	926.58	1339.20	2728.29
11	1.25	1039.77	1702.76	3143.04
12	1.38	1154.99	2118.82	3574.10
13	1.50	1272.26	2589.37	4020.89
14	1.63	1391.58	3116.33	4482.97
15	1.75	1512.94	3701.60	4959.98
16	1.88	1636.35	4347.01	5451.63
17	2.00	1761.80	5054.38	5957.69
18	2.13	1889.30	5825.47	6477.97
19	2.25	2018.84	6662.06	7012.29
20	2.38	2150.43	7565.88	7560.52
21	2.50	2284.06	8538.59	8120.45

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 13

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-22.94	4.17	-1690.22	3288.06
2	0.07	-188.47	323.25	0.00	3241.23
3	0.13	-162.30	526.96	0.00	4350.86
4	0.20	0.00	820.84	0.00	7425.72
5	0.27	0.00	1165.76	0.00	10508.87
6	0.33	0.00	1532.62	0.00	13738.75
7	0.40	0.00	2035.81	0.00	17245.04
8	0.46	0.00	2980.77	-144.64	20874.85
9	0.52	0.00	4153.30	-1379.71	24871.57
10	0.57	0.00	5592.53	-3742.19	29210.91
11	0.63	0.00	7338.55	-3784.13	32394.57
12	1.06	-4561.07	0.00	-12951.91	0.00
13	1.10	-4049.34	0.00	-12720.26	0.00
14	1.17	-3272.17	0.00	-11251.32	0.00
15	1.23	-2611.86	0.00	-9805.75	0.00
16	1.30	-2046.45	0.00	-8502.09	0.00
17	1.37	-1629.05	0.00	-7394.28	0.00
18	1.43	-1287.28	0.00	-6352.87	0.00
19	1.50	-979.75	0.00	-5361.19	0.00
20	1.57	-710.63	0.00	-4405.02	0.00
21	1.63	-482.71	0.00	-3471.59	0.00
22	1.70	-297.53	0.00	-2547.71	0.00
23	1.77	-155.52	1.66	-1756.30	0.00
24	1.83	-56.18	34.17	-1029.98	0.00
25	1.90	0.00	7.01	-484.94	159.27

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-1373.48	0.00	-1519.67	548.35
2	0.13	-1283.01	0.00	-4640.84	3206.56
3	0.27	-937.49	0.00	-7602.83	6681.50
4	0.40	-182.80	49.44	-7688.56	9010.76
5	0.50	-8.95	488.44	-7714.80	6210.95
6	0.63	0.00	930.28	-5763.99	3617.75
7	0.77	0.00	1127.48	-3382.82	1731.25
8	0.90	0.00	1174.33	-1121.25	1121.25
9	1.03	0.00	1127.48	-1731.25	3382.82
10	1.17	0.00	930.28	-3617.75	5763.99
11	1.30	-8.95	488.44	-6210.95	7714.80
12	1.40	-182.80	49.44	-9010.76	7688.56
13	1.53	-937.49	0.00	-6681.50	7602.83
14	1.67	-1283.01	0.00	-3206.56	4640.84
15	1.80	-1373.48	0.00	-1519.67	1519.67
16	1.93	-1283.01	0.00	-4640.84	3206.56
17	2.07	-937.49	0.00	-7602.83	6681.50
18	2.20	-182.80	49.44	-7688.56	9010.76
19	2.30	-8.95	488.44	-7714.80	6210.95
20	2.43	0.00	930.28	-5763.99	3617.75
21	2.57	0.00	1127.48	-3382.82	1731.25
22	2.70	0.00	1174.33	-1121.25	1121.25
23	2.83	0.00	1127.48	-1731.25	3382.82
24	2.97	0.00	930.28	-3617.75	5763.99
25	3.10	-8.95	488.44	-6210.95	7714.80
26	3.20	-182.80	49.44	-9010.76	7688.56
27	3.33	-937.49	0.00	-6681.50	7602.83
28	3.47	-1283.01	0.00	-3206.56	4640.84
29	3.60	-1373.48	0.00	-1519.67	1519.67
30	3.73	-1283.01	0.00	-4640.84	3206.56
31	3.87	-937.49	0.00	-7602.83	6681.50
32	4.00	-182.80	49.44	-7688.56	9010.76
33	4.10	-8.95	488.44	-7714.80	6210.95

34	4.23	0.00	930.28	-5763.99	3617.75
35	4.37	0.00	1127.48	-3382.82	1731.25
36	4.50	0.00	1174.33	-1121.25	1121.25
37	4.63	0.00	1127.48	-1731.25	3382.82
38	4.77	0.00	930.28	-3617.75	5763.99
39	4.90	-8.95	488.44	-6210.95	7714.80
40	5.00	-182.80	49.44	-9010.76	7688.56
41	5.13	-937.49	0.00	-6681.50	7602.83
42	5.27	-1283.01	0.00	-3206.56	4640.84
43	5.40	-1373.48	0.00	-1519.67	1519.67
44	5.53	-1283.01	0.00	-4640.84	3206.56
45	5.67	-937.49	0.00	-7602.83	6681.50
46	5.80	-182.80	49.44	-7688.56	9010.76
47	5.90	-8.95	488.44	-7714.80	6210.95
48	6.03	0.00	930.28	-5763.99	3617.75
49	6.17	0.00	1127.48	-3382.82	1731.25
50	6.30	0.00	1174.33	-1121.25	1121.25
51	6.43	0.00	1127.48	-1731.25	3382.82
52	6.57	0.00	930.28	-3617.75	5763.99
53	6.70	-8.95	488.44	-6210.95	7714.80
54	6.80	-182.80	49.44	-9010.76	7688.56
55	6.93	-937.49	0.00	-6681.50	7602.83
56	7.07	-1283.01	0.00	-3206.56	4640.84
57	7.20	-1373.48	0.00	-1519.67	1519.67
58	7.33	-1283.01	0.00	-4640.84	3206.56
59	7.47	-937.49	0.00	-7602.83	6681.50
60	7.60	-182.80	49.44	-7688.56	9010.76
61	7.70	-8.95	488.44	-7714.80	6210.95
62	7.83	0.00	930.28	-5763.99	3617.75
63	7.97	0.00	1127.48	-3382.82	1731.25
64	8.10	0.00	1174.33	-1121.25	1121.25
65	8.23	0.00	1127.48	-1731.25	3382.82
66	8.37	0.00	930.28	-3617.75	5763.99
67	8.50	-8.95	488.44	-6210.95	7714.80
68	8.60	-182.80	49.44	-9010.76	7688.56
69	8.73	-937.49	0.00	-6681.50	7602.83
70	8.87	-1283.01	0.00	-3206.56	4640.84
71	9.00	-1373.48	0.00	-1519.67	1519.67
72	9.13	-1283.01	0.00	-4640.84	3206.56
73	9.27	-937.49	0.00	-7602.83	6681.50
74	9.40	-182.80	49.44	-7688.56	9010.76
75	9.50	-8.95	488.44	-7714.80	6210.95
76	9.63	0.00	930.28	-5763.99	3617.75
77	9.77	0.00	1127.48	-3382.82	1731.25
78	9.90	0.00	1174.33	-1121.25	1121.25
79	10.03	0.00	1127.48	-1731.25	3382.82
80	10.17	0.00	930.28	-3617.75	5763.99
81	10.30	-8.95	488.44	-6210.95	7714.80
82	10.40	-182.80	49.44	-9010.76	7688.56
83	10.53	-937.49	0.00	-6681.50	7602.83
84	10.67	-1283.01	0.00	-3206.56	4640.84
85	10.80	-1373.48	0.00	-1519.67	1519.67
86	10.93	-1283.01	0.00	-4640.84	3206.56
87	11.07	-937.49	0.00	-7602.83	6681.50
88	11.20	-182.80	49.44	-7688.56	9010.76
89	11.30	-8.95	488.44	-7714.80	6210.95
90	11.43	0.00	930.28	-5763.99	3617.75
91	11.57	0.00	1127.48	-3382.82	1731.25
92	11.70	0.00	1174.33	-1121.25	1121.25
93	11.83	0.00	1127.48	-1731.25	3382.82
94	11.97	0.00	930.28	-3617.75	5763.99
95	12.10	-8.95	488.44	-6210.95	7714.80
96	12.20	-182.80	49.44	-9010.76	7688.56
97	12.33	-937.49	0.00	-6681.50	7602.83
98	12.47	-1283.01	0.00	-3206.56	4640.84
99	12.60	-1373.48	0.00	-1519.67	1519.67
100	12.73	-1283.01	0.00	-4640.84	3206.56
101	12.87	-937.49	0.00	-7602.83	6681.50
102	13.00	-182.80	49.44	-7688.56	9010.76
103	13.10	-8.95	488.44	-7714.80	6210.95
104	13.23	0.00	930.28	-5763.99	3617.75
105	13.37	0.00	1127.48	-3382.82	1731.25
106	13.50	0.00	1174.33	-1121.25	1121.25
107	13.63	0.00	1127.48	-1731.25	3382.82
108	13.77	0.00	930.28	-3617.75	5763.99
109	13.90	-8.95	488.44	-6210.95	7714.80
110	14.00	-182.80	49.44	-9010.76	7688.56

111	14.13	-937.49	0.00	-6681.50	7602.83
112	14.27	-1283.01	0.00	-3206.56	4640.84
113	14.40	-1373.48	0.00	-1519.67	1519.67
114	14.53	-1283.01	0.00	-4640.84	3206.56
115	14.67	-937.49	0.00	-7602.83	6681.50
116	14.80	-182.80	49.44	-7688.56	9010.76
117	14.90	-8.95	488.44	-7714.80	6210.95
118	15.03	0.00	930.28	-5763.99	3617.75
119	15.17	0.00	1127.48	-3382.82	1731.25
120	15.30	0.00	1174.33	-1121.25	1121.25
121	15.43	0.00	1127.48	-1731.25	3382.82
122	15.57	0.00	930.28	-3617.75	5763.99
123	15.70	-8.95	488.44	-6210.95	7714.80
124	15.80	-182.80	49.44	-9010.76	7688.56
125	15.93	-937.49	0.00	-6681.50	7602.83
126	16.07	-1283.01	0.00	-3206.56	4640.84
127	16.20	-1373.48	0.00	-1519.67	1519.67
128	16.33	-1283.01	0.00	-4640.84	3206.56
129	16.47	-937.49	0.00	-7602.83	6681.50
130	16.60	-182.80	49.44	-7688.56	9010.76
131	16.70	-8.95	488.44	-7714.80	6210.95
132	16.83	0.00	930.28	-5763.99	3617.75
133	16.97	0.00	1127.48	-3382.82	1731.25
134	17.10	0.00	1174.33	-1121.25	1121.25
135	17.23	0.00	1127.48	-1731.25	3382.82
136	17.37	0.00	930.28	-3617.75	5763.99
137	17.50	-8.95	488.44	-6210.95	7714.80
138	17.60	-182.80	49.44	-9010.76	7688.56
139	17.73	-937.49	0.00	-6681.50	7602.83
140	17.87	-1283.01	0.00	-3206.56	4640.84
141	18.00	-1373.48	0.00	-1519.67	1519.67
142	18.13	-1283.01	0.00	-4640.84	3206.56
143	18.27	-937.49	0.00	-7602.83	6681.50
144	18.40	-182.80	49.44	-7688.56	9010.76
145	18.50	-8.95	488.44	-7714.80	6210.95
146	18.63	0.00	930.28	-5763.99	3617.75
147	18.77	0.00	1127.48	-3382.82	1731.25
148	18.90	0.00	1174.33	-1121.25	1121.25
149	19.03	0.00	1127.48	-1731.25	3382.82
150	19.17	0.00	930.28	-3617.75	5763.99
151	19.30	-8.95	488.44	-6210.95	7714.80
152	19.40	-182.80	49.44	-9010.76	7688.56
153	19.53	-937.49	0.00	-6681.50	7602.83
154	19.67	-1283.01	0.00	-3206.56	4640.84
155	19.80	-1373.48	0.00	-1519.67	1519.67
156	19.93	-1283.01	0.00	-4640.84	3206.56
157	20.07	-937.49	0.00	-7602.83	6681.50
158	20.20	-182.80	49.44	-7688.56	9010.76
159	20.30	-8.95	488.44	-7714.80	6210.95
160	20.43	0.00	930.28	-5763.99	3617.75
161	20.57	0.00	1127.48	-3382.82	1731.25
162	20.70	0.00	1174.33	-1121.25	1121.25
163	20.83	0.00	1127.48	-1731.25	3382.82
164	20.97	0.00	930.28	-3617.75	5763.99
165	21.10	-8.95	488.44	-6210.95	7714.80
166	21.20	-182.80	49.44	-9010.76	7688.56
167	21.33	-937.49	0.00	-6681.50	7602.83
168	21.47	-1283.01	0.00	-3206.56	4640.84
169	21.60	-1373.48	0.00	-1519.67	1519.67
170	21.73	-1283.01	0.00	-4640.84	3206.56
171	21.87	-937.49	0.00	-7602.83	6681.50
172	22.00	-182.80	49.44	-7688.56	9010.76
173	22.10	-8.95	488.44	-7714.80	6210.95
174	22.23	0.00	930.28	-5763.99	3617.75
175	22.37	0.00	1127.48	-3382.82	1731.25
176	22.50	0.00	1174.33	-1121.25	1121.24
177	22.63	0.00	1127.48	-1731.25	3382.82
178	22.77	0.00	930.28	-3617.76	5763.98
179	22.90	-8.95	488.44	-6210.95	7714.80
180	23.00	-182.80	49.44	-9010.76	7688.56
181	23.13	-937.49	0.00	-6681.50	7602.83
182	23.27	-1283.01	0.00	-3206.55	4640.83
183	23.40	-1373.49	0.00	-1519.68	1519.67
184	23.53	-1283.01	0.00	-4640.85	3206.52
185	23.67	-937.49	0.00	-7602.85	6681.47
186	23.80	-182.80	49.44	-7688.58	9010.76
187	23.90	-8.95	488.43	-7714.82	6210.93

188	24.03	0.00	930.27	-5764.01	3617.73
189	24.17	0.00	1127.46	-3382.85	1731.23
190	24.30	0.00	1174.32	-1121.29	1121.19
191	24.43	0.00	1127.46	-1731.30	3382.75
192	24.57	0.00	930.25	-3617.81	5763.90
193	24.70	-8.95	488.40	-6211.03	7714.69
194	24.80	-182.83	49.44	-9010.98	7688.45
195	24.93	-937.54	0.00	-6681.27	7602.69
196	25.07	-1283.08	0.00	-3206.31	4640.65
197	25.20	-1373.57	0.00	-1519.99	1519.43
198	25.33	-1283.11	0.00	-4641.24	3205.37
199	25.47	-937.63	0.00	-7603.36	6680.44
200	25.60	-182.95	49.43	-7689.18	9010.82
201	25.70	-8.95	488.20	-7715.41	6210.49
202	25.83	0.00	929.99	-5764.75	3617.17
203	25.97	0.00	1127.11	-3383.81	1730.53
204	26.10	0.00	1173.88	-1122.53	1119.58
205	26.23	0.00	1126.89	-1732.74	3380.69
206	26.37	0.00	929.51	-3619.52	5761.22
207	26.50	-8.93	487.42	-6213.43	7711.40
208	26.60	-183.80	49.43	-9017.64	7685.17
209	26.73	-939.09	0.00	-6674.34	7598.35
210	26.87	-1285.06	0.00	-3199.06	4635.07
211	27.00	-1376.12	0.00	-1529.21	1512.25
212	27.13	-1286.24	0.00	-4653.09	3170.34
213	27.27	-941.71	0.00	-7618.88	6649.18
214	27.40	-187.38	49.39	-7707.25	9012.66
215	27.50	-8.92	481.36	-7733.53	6197.07
216	27.63	0.00	921.46	-5787.23	3599.89
217	27.77	0.00	1116.18	-3412.91	1709.36
218	27.90	0.00	1160.50	-1160.04	1071.41
219	28.03	0.00	1109.60	-1777.87	3319.66
220	28.17	0.00	906.84	-3674.44	5682.51
221	28.30	-8.36	456.97	-6292.53	7615.55
222	28.40	-214.12	49.27	-9239.26	7589.60
223	28.53	-988.51	0.00	-6503.13	7472.79
224	28.67	-1349.92	0.00	-3106.08	4474.03
225	28.80	-1462.27	0.00	-1802.60	1317.44
226	28.93	-1396.01	0.00	-5022.49	2057.99
227	29.07	-1090.36	0.00	-8127.81	5616.13
228	29.20	-386.42	42.58	-8097.58	9005.87
229	29.33	-151.84	343.76	-8127.82	5155.12
230	29.47	-128.33	626.42	-6285.98	2358.28
231	29.60	-104.32	680.86	-4512.85	625.24
232	29.73	-79.41	603.97	-3299.85	310.91
233	29.87	-57.50	477.74	-3179.75	575.42
234	30.00	-52.31	16.26	-3215.39	545.33

Armature e tensioni nei materiali del muro

Combinazione n° 13

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
V _{Rcd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
V _{Rsd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
V _{Rd}	Resistenza al taglio, espresso in [kg]

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Red}	V _{Rsd}
1	0.00	100, 30	10.05	8.04	0	0	1000.00	13007	--	--
2	0.13	100, 31	10.05	8.04	174353	-24938	1839.70	13157	--	--
3	0.25	100, 31	10.05	8.04	63619	-18362	332.06	13305	--	--
4	0.38	100, 32	10.05	8.04	35144	-15348	121.00	13453	--	--
5	0.50	100, 33	10.05	8.04	24405	-14332	62.36	13600	--	--
6	0.63	100, 33	14.07	8.04	25765	-19109	52.12	15369	--	--
7	0.75	100, 34	14.07	8.04	20914	-18922	34.90	15529	--	--
8	0.88	100, 35	14.07	8.04	17540	-18901	24.83	15688	--	--
9	1.00	100, 35	14.07	8.04	15088	-18985	18.50	15847	--	--
10	1.13	100, 36	14.07	8.04	13241	-19137	14.29	16004	--	--
11	1.25	100, 37	14.07	8.04	11808	-19337	11.36	16161	--	--

12	1.38	100, 37	14.07	8.04	10668	-19571	9.24	16317	--	--
13	1.50	100, 38	14.07	8.04	9743	-19829	7.66	16472	--	--
14	1.63	100, 39	14.07	8.04	8978	-20106	6.45	16627	--	--
15	1.75	100, 39	14.07	8.04	8337	-20397	5.51	16780	--	--
16	1.88	100, 40	14.07	8.04	7792	-20700	4.76	16933	--	--
17	2.00	100, 40	28.15	16.08	14293	-41004	8.11	21463	--	--
18	2.13	100, 41	14.07	8.04	6918	-21330	3.66	17237	--	--
19	2.25	100, 42	14.07	8.04	6562	-21654	3.25	17388	--	--
20	2.38	100, 42	14.07	8.04	6248	-21984	2.91	17539	--	--
21	2.50	100, 43	14.07	8.04	5970	-22318	2.61	17689	--	--

Armature e tensioni nei materiali della fondazione

Combinazione n° 13

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
V _{Rcd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
V _{Rsd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
V _{Rd}	Resistenza al taglio, espresso in [kg]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	-11345	494.55	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	35.10	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	21.53	15220	--	--
4	0.20	100, 40	8.04	8.04	0	11345	13.82	15220	--	--
5	0.27	100, 40	8.04	8.04	0	11345	9.73	15220	--	--
6	0.33	100, 40	8.04	8.04	0	11345	7.40	98910	118010	98910
7	0.40	100, 40	8.04	8.04	0	11345	5.57	106555	118010	106555
8	0.46	100, 40	8.04	8.04	0	11345	3.81	15220	--	--
9	0.52	100, 40	8.04	8.04	0	11345	2.73	15220	--	--
10	0.57	100, 40	8.04	8.04	0	11345	2.03	15220	--	--
11	0.63	100, 40	8.04	10.05	0	14108	1.92	15220	--	--

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	11345	1000.00	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	201.95	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	72.95	15220	--	--
4	0.20	100, 40	8.04	8.04	0	-11345	38.13	15220	--	--
5	0.27	100, 40	8.04	8.04	0	-11345	23.50	15220	--	--
6	0.33	100, 40	8.04	8.04	0	-11345	15.96	15220	--	--
7	0.40	100, 40	8.04	8.04	0	-11345	11.58	15220	--	--
8	0.47	100, 40	8.04	8.04	0	-11345	8.81	15220	--	--
9	0.53	100, 40	8.04	8.04	0	-11345	6.96	15220	--	--
10	0.60	100, 40	8.04	8.04	0	-11345	5.54	15220	--	--
11	0.67	100, 40	8.04	8.04	0	-11345	4.34	15220	--	--
12	0.73	100, 40	8.04	8.04	0	-11345	3.47	15220	--	--
13	0.80	100, 40	8.04	8.04	0	-11345	2.80	15220	--	--
14	0.84	100, 40	8.04	8.04	0	-11345	2.49	15220	--	--

Armature e tensioni piastre

Combinazione n° 13

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	10.72
2	0.13	2.83	2.83	0	-4090	11.43

3	0.27	2.83	2.83	0	-4090	14.76
4	0.40	2.83	2.83	0	-4090	31.30
5	0.50	2.83	2.83	0	4090	66.61
6	0.63	2.83	2.83	0	4090	14.71
7	0.77	2.83	2.83	0	4090	10.40
8	0.90	2.83	2.83	0	4090	9.55
9	1.03	2.83	2.83	0	4090	10.40
10	1.17	2.83	2.83	0	4090	14.71
11	1.30	2.83	2.83	0	4090	66.61
12	1.40	2.83	2.83	0	-4090	31.30
13	1.53	2.83	2.83	0	-4090	14.76
14	1.67	2.83	2.83	0	-4090	11.43
15	1.80	2.83	2.83	0	-4090	10.72
16	1.93	2.83	2.83	0	-4090	11.43
17	2.07	2.83	2.83	0	-4090	14.76
18	2.20	2.83	2.83	0	-4090	31.30
19	2.30	2.83	2.83	0	4090	66.61
20	2.43	2.83	2.83	0	4090	14.71
21	2.57	2.83	2.83	0	4090	10.40
22	2.70	2.83	2.83	0	4090	9.55
23	2.83	2.83	2.83	0	4090	10.40
24	2.97	2.83	2.83	0	4090	14.71
25	3.10	2.83	2.83	0	4090	66.61
26	3.20	2.83	2.83	0	-4090	31.30
27	3.33	2.83	2.83	0	-4090	14.76
28	3.47	2.83	2.83	0	-4090	11.43
29	3.60	2.83	2.83	0	-4090	10.72
30	3.73	2.83	2.83	0	-4090	11.43
31	3.87	2.83	2.83	0	-4090	14.76
32	4.00	2.83	2.83	0	-4090	31.30
33	4.10	2.83	2.83	0	4090	66.61
34	4.23	2.83	2.83	0	4090	14.71
35	4.37	2.83	2.83	0	4090	10.40
36	4.50	2.83	2.83	0	4090	9.55
37	4.63	2.83	2.83	0	4090	10.40
38	4.77	2.83	2.83	0	4090	14.71
39	4.90	2.83	2.83	0	4090	66.61
40	5.00	2.83	2.83	0	-4090	31.30
41	5.13	2.83	2.83	0	-4090	14.76
42	5.27	2.83	2.83	0	-4090	11.43
43	5.40	2.83	2.83	0	-4090	10.72
44	5.53	2.83	2.83	0	-4090	11.43
45	5.67	2.83	2.83	0	-4090	14.76
46	5.80	2.83	2.83	0	-4090	31.30
47	5.90	2.83	2.83	0	4090	66.61
48	6.03	2.83	2.83	0	4090	14.71
49	6.17	2.83	2.83	0	4090	10.40
50	6.30	2.83	2.83	0	4090	9.55
51	6.43	2.83	2.83	0	4090	10.40
52	6.57	2.83	2.83	0	4090	14.71
53	6.70	2.83	2.83	0	4090	66.61
54	6.80	2.83	2.83	0	-4090	31.30
55	6.93	2.83	2.83	0	-4090	14.76
56	7.07	2.83	2.83	0	-4090	11.43
57	7.20	2.83	2.83	0	-4090	10.72
58	7.33	2.83	2.83	0	-4090	11.43
59	7.47	2.83	2.83	0	-4090	14.76
60	7.60	2.83	2.83	0	-4090	31.30
61	7.70	2.83	2.83	0	4090	66.61
62	7.83	2.83	2.83	0	4090	14.71
63	7.97	2.83	2.83	0	4090	10.40
64	8.10	2.83	2.83	0	4090	9.55
65	8.23	2.83	2.83	0	4090	10.40
66	8.37	2.83	2.83	0	4090	14.71
67	8.50	2.83	2.83	0	4090	66.61
68	8.60	2.83	2.83	0	-4090	31.30
69	8.73	2.83	2.83	0	-4090	14.76
70	8.87	2.83	2.83	0	-4090	11.43
71	9.00	2.83	2.83	0	-4090	10.72
72	9.13	2.83	2.83	0	-4090	11.43
73	9.27	2.83	2.83	0	-4090	14.76
74	9.40	2.83	2.83	0	-4090	31.30
75	9.50	2.83	2.83	0	4090	66.61
76	9.63	2.83	2.83	0	4090	14.71
77	9.77	2.83	2.83	0	4090	10.40
78	9.90	2.83	2.83	0	4090	9.55
79	10.03	2.83	2.83	0	4090	10.40

80	10.17	2.83	2.83	0	4090	14.71
81	10.30	2.83	2.83	0	4090	66.61
82	10.40	2.83	2.83	0	-4090	31.30
83	10.53	2.83	2.83	0	-4090	14.76
84	10.67	2.83	2.83	0	-4090	11.43
85	10.80	2.83	2.83	0	-4090	10.72
86	10.93	2.83	2.83	0	-4090	11.43
87	11.07	2.83	2.83	0	-4090	14.76
88	11.20	2.83	2.83	0	-4090	31.30
89	11.30	2.83	2.83	0	4090	66.61
90	11.43	2.83	2.83	0	4090	14.71
91	11.57	2.83	2.83	0	4090	10.40
92	11.70	2.83	2.83	0	4090	9.55
93	11.83	2.83	2.83	0	4090	10.40
94	11.97	2.83	2.83	0	4090	14.71
95	12.10	2.83	2.83	0	4090	66.61
96	12.20	2.83	2.83	0	-4090	31.30
97	12.33	2.83	2.83	0	-4090	14.76
98	12.47	2.83	2.83	0	-4090	11.43
99	12.60	2.83	2.83	0	-4090	10.72
100	12.73	2.83	2.83	0	-4090	11.43
101	12.87	2.83	2.83	0	-4090	14.76
102	13.00	2.83	2.83	0	-4090	31.30
103	13.10	2.83	2.83	0	4090	66.61
104	13.23	2.83	2.83	0	4090	14.71
105	13.37	2.83	2.83	0	4090	10.40
106	13.50	2.83	2.83	0	4090	9.55
107	13.63	2.83	2.83	0	4090	10.40
108	13.77	2.83	2.83	0	4090	14.71
109	13.90	2.83	2.83	0	4090	66.61
110	14.00	2.83	2.83	0	-4090	31.30
111	14.13	2.83	2.83	0	-4090	14.76
112	14.27	2.83	2.83	0	-4090	11.43
113	14.40	2.83	2.83	0	-4090	10.72
114	14.53	2.83	2.83	0	-4090	11.43
115	14.67	2.83	2.83	0	-4090	14.76
116	14.80	2.83	2.83	0	-4090	31.30
117	14.90	2.83	2.83	0	4090	66.61
118	15.03	2.83	2.83	0	4090	14.71
119	15.17	2.83	2.83	0	4090	10.40
120	15.30	2.83	2.83	0	4090	9.55
121	15.43	2.83	2.83	0	4090	10.40
122	15.57	2.83	2.83	0	4090	14.71
123	15.70	2.83	2.83	0	4090	66.61
124	15.80	2.83	2.83	0	-4090	31.30
125	15.93	2.83	2.83	0	-4090	14.76
126	16.07	2.83	2.83	0	-4090	11.43
127	16.20	2.83	2.83	0	-4090	10.72
128	16.33	2.83	2.83	0	-4090	11.43
129	16.47	2.83	2.83	0	-4090	14.76
130	16.60	2.83	2.83	0	-4090	31.30
131	16.70	2.83	2.83	0	4090	66.61
132	16.83	2.83	2.83	0	4090	14.71
133	16.97	2.83	2.83	0	4090	10.40
134	17.10	2.83	2.83	0	4090	9.55
135	17.23	2.83	2.83	0	4090	10.40
136	17.37	2.83	2.83	0	4090	14.71
137	17.50	2.83	2.83	0	4090	66.61
138	17.60	2.83	2.83	0	-4090	31.30
139	17.73	2.83	2.83	0	-4090	14.76
140	17.87	2.83	2.83	0	-4090	11.43
141	18.00	2.83	2.83	0	-4090	10.72
142	18.13	2.83	2.83	0	-4090	11.43
143	18.27	2.83	2.83	0	-4090	14.76
144	18.40	2.83	2.83	0	-4090	31.30
145	18.50	2.83	2.83	0	4090	66.61
146	18.63	2.83	2.83	0	4090	14.71
147	18.77	2.83	2.83	0	4090	10.40
148	18.90	2.83	2.83	0	4090	9.55
149	19.03	2.83	2.83	0	4090	10.40
150	19.17	2.83	2.83	0	4090	14.71
151	19.30	2.83	2.83	0	4090	66.61
152	19.40	2.83	2.83	0	-4090	31.30
153	19.53	2.83	2.83	0	-4090	14.76
154	19.67	2.83	2.83	0	-4090	11.43
155	19.80	2.83	2.83	0	-4090	10.72
156	19.93	2.83	2.83	0	-4090	11.43

157	20.07	2.83	2.83	0	-4090	14.76
158	20.20	2.83	2.83	0	-4090	31.30
159	20.30	2.83	2.83	0	4090	66.61
160	20.43	2.83	2.83	0	4090	14.71
161	20.57	2.83	2.83	0	4090	10.40
162	20.70	2.83	2.83	0	4090	9.55
163	20.83	2.83	2.83	0	4090	10.40
164	20.97	2.83	2.83	0	4090	14.71
165	21.10	2.83	2.83	0	4090	66.61
166	21.20	2.83	2.83	0	-4090	31.30
167	21.33	2.83	2.83	0	-4090	14.76
168	21.47	2.83	2.83	0	-4090	11.43
169	21.60	2.83	2.83	0	-4090	10.72
170	21.73	2.83	2.83	0	-4090	11.43
171	21.87	2.83	2.83	0	-4090	14.76
172	22.00	2.83	2.83	0	-4090	31.31
173	22.10	2.83	2.83	0	4090	66.59
174	22.23	2.83	2.83	0	4090	14.71
175	22.37	2.83	2.83	0	4090	10.40
176	22.50	2.83	2.83	0	4090	9.55
177	22.63	2.83	2.83	0	4090	10.40
178	22.77	2.83	2.83	0	4090	14.71
179	22.90	2.83	2.83	0	4090	66.55
180	23.00	2.83	2.83	0	-4090	31.32
181	23.13	2.83	2.83	0	-4090	14.76
182	23.27	2.83	2.83	0	-4090	11.44
183	23.40	2.83	2.83	0	-4090	10.73
184	23.53	2.83	2.83	0	-4090	11.44
185	23.67	2.83	2.83	0	-4090	14.77
186	23.80	2.83	2.83	0	-4090	31.36
187	23.90	2.83	2.83	0	4090	66.36
188	24.03	2.83	2.83	0	4090	14.69
189	24.17	2.83	2.83	0	4090	10.39
190	24.30	2.83	2.83	0	4090	9.54
191	24.43	2.83	2.83	0	4090	10.38
192	24.57	2.83	2.83	0	4090	14.67
193	24.70	2.83	2.83	0	4090	65.82
194	24.80	2.83	2.83	0	-4090	31.55
195	24.93	2.83	2.83	0	-4090	14.82
196	25.07	2.83	2.83	0	-4090	11.48
197	25.20	2.83	2.83	0	-4090	10.77
198	25.33	2.83	2.83	0	-4090	11.50
199	25.47	2.83	2.83	0	-4090	14.89
200	25.60	2.83	2.83	0	-4090	32.06
201	25.70	2.83	2.83	0	4090	63.43
202	25.83	2.83	2.83	0	4090	14.49
203	25.97	2.83	2.83	0	4090	10.26
204	26.10	2.83	2.83	0	4090	9.41
205	26.23	2.83	2.83	0	4090	10.20
206	26.37	2.83	2.83	0	4090	14.25
207	26.50	2.83	2.83	0	4090	57.39
208	26.60	2.83	2.83	0	-4090	34.87
209	26.73	2.83	2.83	0	-4090	15.65
210	26.87	2.83	2.83	0	-4090	12.08
211	27.00	2.83	2.83	0	-4090	11.40
212	27.13	2.83	2.83	0	-4090	12.39
213	27.27	2.83	2.83	0	-4090	16.82
214	27.40	2.83	2.83	0	-4090	46.34
215	27.50	2.83	2.83	0	4090	38.26
216	27.63	2.83	2.83	0	4090	12.12
217	27.77	2.83	2.83	0	4090	8.79
218	27.90	2.83	2.83	0	4090	7.94
219	28.03	2.83	2.83	0	4090	8.25
220	28.17	2.83	2.83	0	4090	10.22
221	28.30	2.83	2.83	0	4090	20.39
222	28.40	2.83	2.83	0	-4090	108.95
223	28.53	2.83	2.83	0	-4090	40.22
224	28.67	2.83	2.83	0	-4090	23.60
225	28.80	2.83	2.83	0	-4090	20.21
226	28.93	2.83	2.83	0	-4090	19.91
227	29.07	2.83	2.83	0	-4090	21.14
228	29.20	2.83	2.83	0	-4090	23.51
229	29.33	2.83	2.83	0	-4090	26.93
230	29.47	2.83	2.83	0	-4090	31.87
231	29.60	2.83	2.83	0	4090	39.21
232	29.73	2.83	2.83	0	4090	51.50
233	29.87	2.83	2.83	0	4090	71.12

234 30.00 2.83 2.83 0 4090 251.51

Piastra fondazione valle

Nr.	X	A _R	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	2.98
2	0.13	2.83	2.83	0	-4090	3.19
3	0.27	2.83	2.83	0	-4090	4.36
4	0.40	2.83	2.83	0	-4090	22.37
5	0.50	2.83	2.83	0	4090	8.37
6	0.63	2.83	2.83	0	4090	4.40
7	0.77	2.83	2.83	0	4090	3.63
8	0.90	2.83	2.83	0	4090	3.48
9	1.03	2.83	2.83	0	4090	3.63
10	1.17	2.83	2.83	0	4090	4.40
11	1.30	2.83	2.83	0	4090	8.37
12	1.40	2.83	2.83	0	-4090	22.37
13	1.53	2.83	2.83	0	-4090	4.36
14	1.67	2.83	2.83	0	-4090	3.19
15	1.80	2.83	2.83	0	-4090	2.98
16	1.93	2.83	2.83	0	-4090	3.19
17	2.07	2.83	2.83	0	-4090	4.36
18	2.20	2.83	2.83	0	-4090	22.37
19	2.30	2.83	2.83	0	4090	8.37
20	2.43	2.83	2.83	0	4090	4.40
21	2.57	2.83	2.83	0	4090	3.63
22	2.70	2.83	2.83	0	4090	3.48
23	2.83	2.83	2.83	0	4090	3.63
24	2.97	2.83	2.83	0	4090	4.40
25	3.10	2.83	2.83	0	4090	8.37
26	3.20	2.83	2.83	0	-4090	22.37
27	3.33	2.83	2.83	0	-4090	4.36
28	3.47	2.83	2.83	0	-4090	3.19
29	3.60	2.83	2.83	0	-4090	2.98
30	3.73	2.83	2.83	0	-4090	3.19
31	3.87	2.83	2.83	0	-4090	4.36
32	4.00	2.83	2.83	0	-4090	22.37
33	4.10	2.83	2.83	0	4090	8.37
34	4.23	2.83	2.83	0	4090	4.40
35	4.37	2.83	2.83	0	4090	3.63
36	4.50	2.83	2.83	0	4090	3.48
37	4.63	2.83	2.83	0	4090	3.63
38	4.77	2.83	2.83	0	4090	4.40
39	4.90	2.83	2.83	0	4090	8.37
40	5.00	2.83	2.83	0	-4090	22.37
41	5.13	2.83	2.83	0	-4090	4.36
42	5.27	2.83	2.83	0	-4090	3.19
43	5.40	2.83	2.83	0	-4090	2.98
44	5.53	2.83	2.83	0	-4090	3.19
45	5.67	2.83	2.83	0	-4090	4.36
46	5.80	2.83	2.83	0	-4090	22.37
47	5.90	2.83	2.83	0	4090	8.37
48	6.03	2.83	2.83	0	4090	4.40
49	6.17	2.83	2.83	0	4090	3.63
50	6.30	2.83	2.83	0	4090	3.48
51	6.43	2.83	2.83	0	4090	3.63
52	6.57	2.83	2.83	0	4090	4.40
53	6.70	2.83	2.83	0	4090	8.37
54	6.80	2.83	2.83	0	-4090	22.37
55	6.93	2.83	2.83	0	-4090	4.36
56	7.07	2.83	2.83	0	-4090	3.19
57	7.20	2.83	2.83	0	-4090	2.98
58	7.33	2.83	2.83	0	-4090	3.19
59	7.47	2.83	2.83	0	-4090	4.36
60	7.60	2.83	2.83	0	-4090	22.37
61	7.70	2.83	2.83	0	4090	8.37
62	7.83	2.83	2.83	0	4090	4.40
63	7.97	2.83	2.83	0	4090	3.63
64	8.10	2.83	2.83	0	4090	3.48
65	8.23	2.83	2.83	0	4090	3.63
66	8.37	2.83	2.83	0	4090	4.40
67	8.50	2.83	2.83	0	4090	8.37
68	8.60	2.83	2.83	0	-4090	22.37
69	8.73	2.83	2.83	0	-4090	4.36
70	8.87	2.83	2.83	0	-4090	3.19
71	9.00	2.83	2.83	0	-4090	2.98
72	9.13	2.83	2.83	0	-4090	3.19

73	9.27	2.83	2.83	0	-4090	4.36
74	9.40	2.83	2.83	0	-4090	22.37
75	9.50	2.83	2.83	0	4090	8.37
76	9.63	2.83	2.83	0	4090	4.40
77	9.77	2.83	2.83	0	4090	3.63
78	9.90	2.83	2.83	0	4090	3.48
79	10.03	2.83	2.83	0	4090	3.63
80	10.17	2.83	2.83	0	4090	4.40
81	10.30	2.83	2.83	0	4090	8.37
82	10.40	2.83	2.83	0	-4090	22.37
83	10.53	2.83	2.83	0	-4090	4.36
84	10.67	2.83	2.83	0	-4090	3.19
85	10.80	2.83	2.83	0	-4090	2.98
86	10.93	2.83	2.83	0	-4090	3.19
87	11.07	2.83	2.83	0	-4090	4.36
88	11.20	2.83	2.83	0	-4090	22.37
89	11.30	2.83	2.83	0	4090	8.37
90	11.43	2.83	2.83	0	4090	4.40
91	11.57	2.83	2.83	0	4090	3.63
92	11.70	2.83	2.83	0	4090	3.48
93	11.83	2.83	2.83	0	4090	3.63
94	11.97	2.83	2.83	0	4090	4.40
95	12.10	2.83	2.83	0	4090	8.37
96	12.20	2.83	2.83	0	-4090	22.37
97	12.33	2.83	2.83	0	-4090	4.36
98	12.47	2.83	2.83	0	-4090	3.19
99	12.60	2.83	2.83	0	-4090	2.98
100	12.73	2.83	2.83	0	-4090	3.19
101	12.87	2.83	2.83	0	-4090	4.36
102	13.00	2.83	2.83	0	-4090	22.37
103	13.10	2.83	2.83	0	4090	8.37
104	13.23	2.83	2.83	0	4090	4.40
105	13.37	2.83	2.83	0	4090	3.63
106	13.50	2.83	2.83	0	4090	3.48
107	13.63	2.83	2.83	0	4090	3.63
108	13.77	2.83	2.83	0	4090	4.40
109	13.90	2.83	2.83	0	4090	8.37
110	14.00	2.83	2.83	0	-4090	22.37
111	14.13	2.83	2.83	0	-4090	4.36
112	14.27	2.83	2.83	0	-4090	3.19
113	14.40	2.83	2.83	0	-4090	2.98
114	14.53	2.83	2.83	0	-4090	3.19
115	14.67	2.83	2.83	0	-4090	4.36
116	14.80	2.83	2.83	0	-4090	22.37
117	14.90	2.83	2.83	0	4090	8.37
118	15.03	2.83	2.83	0	4090	4.40
119	15.17	2.83	2.83	0	4090	3.63
120	15.30	2.83	2.83	0	4090	3.48
121	15.43	2.83	2.83	0	4090	3.63
122	15.57	2.83	2.83	0	4090	4.40
123	15.70	2.83	2.83	0	4090	8.37
124	15.80	2.83	2.83	0	-4090	22.37
125	15.93	2.83	2.83	0	-4090	4.36
126	16.07	2.83	2.83	0	-4090	3.19
127	16.20	2.83	2.83	0	-4090	2.98
128	16.33	2.83	2.83	0	-4090	3.19
129	16.47	2.83	2.83	0	-4090	4.36
130	16.60	2.83	2.83	0	-4090	22.37
131	16.70	2.83	2.83	0	4090	8.37
132	16.83	2.83	2.83	0	4090	4.40
133	16.97	2.83	2.83	0	4090	3.63
134	17.10	2.83	2.83	0	4090	3.48
135	17.23	2.83	2.83	0	4090	3.63
136	17.37	2.83	2.83	0	4090	4.40
137	17.50	2.83	2.83	0	4090	8.37
138	17.60	2.83	2.83	0	-4090	22.37
139	17.73	2.83	2.83	0	-4090	4.36
140	17.87	2.83	2.83	0	-4090	3.19
141	18.00	2.83	2.83	0	-4090	2.98
142	18.13	2.83	2.83	0	-4090	3.19
143	18.27	2.83	2.83	0	-4090	4.36
144	18.40	2.83	2.83	0	-4090	22.37
145	18.50	2.83	2.83	0	4090	8.37
146	18.63	2.83	2.83	0	4090	4.40
147	18.77	2.83	2.83	0	4090	3.63
148	18.90	2.83	2.83	0	4090	3.48
149	19.03	2.83	2.83	0	4090	3.63

150	19.17	2.83	2.83	0	4090	4.40
151	19.30	2.83	2.83	0	4090	8.37
152	19.40	2.83	2.83	0	-4090	22.37
153	19.53	2.83	2.83	0	-4090	4.36
154	19.67	2.83	2.83	0	-4090	3.19
155	19.80	2.83	2.83	0	-4090	2.98
156	19.93	2.83	2.83	0	-4090	3.19
157	20.07	2.83	2.83	0	-4090	4.36
158	20.20	2.83	2.83	0	-4090	22.37
159	20.30	2.83	2.83	0	4090	8.37
160	20.43	2.83	2.83	0	4090	4.40
161	20.57	2.83	2.83	0	4090	3.63
162	20.70	2.83	2.83	0	4090	3.48
163	20.83	2.83	2.83	0	4090	3.63
164	20.97	2.83	2.83	0	4090	4.40
165	21.10	2.83	2.83	0	4090	8.37
166	21.20	2.83	2.83	0	-4090	22.37
167	21.33	2.83	2.83	0	-4090	4.36
168	21.47	2.83	2.83	0	-4090	3.19
169	21.60	2.83	2.83	0	-4090	2.98
170	21.73	2.83	2.83	0	-4090	3.19
171	21.87	2.83	2.83	0	-4090	4.36
172	22.00	2.83	2.83	0	-4090	22.37
173	22.10	2.83	2.83	0	4090	8.37
174	22.23	2.83	2.83	0	4090	4.40
175	22.37	2.83	2.83	0	4090	3.63
176	22.50	2.83	2.83	0	4090	3.48
177	22.63	2.83	2.83	0	4090	3.63
178	22.77	2.83	2.83	0	4090	4.40
179	22.90	2.83	2.83	0	4090	8.37
180	23.00	2.83	2.83	0	-4090	22.37
181	23.13	2.83	2.83	0	-4090	4.36
182	23.27	2.83	2.83	0	-4090	3.19
183	23.40	2.83	2.83	0	-4090	2.98
184	23.53	2.83	2.83	0	-4090	3.19
185	23.67	2.83	2.83	0	-4090	4.36
186	23.80	2.83	2.83	0	-4090	22.37
187	23.90	2.83	2.83	0	4090	8.37
188	24.03	2.83	2.83	0	4090	4.40
189	24.17	2.83	2.83	0	4090	3.63
190	24.30	2.83	2.83	0	4090	3.48
191	24.43	2.83	2.83	0	4090	3.63
192	24.57	2.83	2.83	0	4090	4.40
193	24.70	2.83	2.83	0	4090	8.37
194	24.80	2.83	2.83	0	-4090	22.37
195	24.93	2.83	2.83	0	-4090	4.36
196	25.07	2.83	2.83	0	-4090	3.19
197	25.20	2.83	2.83	0	-4090	2.98
198	25.33	2.83	2.83	0	-4090	3.19
199	25.47	2.83	2.83	0	-4090	4.36
200	25.60	2.83	2.83	0	-4090	22.36
201	25.70	2.83	2.83	0	4090	8.38
202	25.83	2.83	2.83	0	4090	4.40
203	25.97	2.83	2.83	0	4090	3.63
204	26.10	2.83	2.83	0	4090	3.48
205	26.23	2.83	2.83	0	4090	3.63
206	26.37	2.83	2.83	0	4090	4.40
207	26.50	2.83	2.83	0	4090	8.39
208	26.60	2.83	2.83	0	-4090	22.25
209	26.73	2.83	2.83	0	-4090	4.36
210	26.87	2.83	2.83	0	-4090	3.18
211	27.00	2.83	2.83	0	-4090	2.97
212	27.13	2.83	2.83	0	-4090	3.18
213	27.27	2.83	2.83	0	-4090	4.34
214	27.40	2.83	2.83	0	-4090	21.83
215	27.50	2.83	2.83	0	4090	8.50
216	27.63	2.83	2.83	0	4090	4.44
217	27.77	2.83	2.83	0	4090	3.66
218	27.90	2.83	2.83	0	4090	3.52
219	28.03	2.83	2.83	0	4090	3.69
220	28.17	2.83	2.83	0	4090	4.51
221	28.30	2.83	2.83	0	4090	8.95
222	28.40	2.83	2.83	0	-4090	19.10
223	28.53	2.83	2.83	0	-4090	4.14
224	28.67	2.83	2.83	0	-4090	3.03
225	28.80	2.83	2.83	0	-4090	2.80
226	28.93	2.83	2.83	0	-4090	2.93

227	29.07	2.83	2.83	0	-4090	3.75
228	29.20	2.83	2.83	0	-4090	10.58
229	29.33	2.83	2.83	0	4090	11.90
230	29.47	2.83	2.83	0	4090	6.53
231	29.60	2.83	2.83	0	4090	6.01
232	29.73	2.83	2.83	0	4090	6.77
233	29.87	2.83	2.83	0	4090	8.56
234	30.00	2.83	2.83	0	-4090	78.19

Analisi dei pali

Combinazione n° 13

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	12368.6
Verticale	[kg]	11911.2
Momento	[kgm]	-11110.8

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.39366
Verticale	[cm]	0.00599
Rotazione	[°]	-0.01076

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]	Tr [kg]	Mr [kgm]
1	32	-7783	11417	0	37189	0
2	33	29203	11417	0	37189	0

Dettagli calcolo della portanza

τ_m	tensione tangenziale media palo-terreno in [kg/cm ²]
σ_p	tensione sul terreno alla punta del palo in [kg/cm ²]
N_c, N_q, N_γ	fattori di capacità portante
N'_c, N'_q, N'_γ	fattori di capacità portante corretti
P_1	portanza caratteristica per attrito e aderenza laterale in [kg]
P_p	portanza caratteristica di punta in [kg]
P_d	portanza di progetto, in [kg]
W_p	peso del palo, in [kg]
T_d	portanza trasversale di progetto, espresso in [kg]
PT	Parametri Terreno utilizzati

Fila	N_c	N'_c	N_q	N'_q	N_γ	N'_γ	τ_m	σ_p
1	23.36	23.36	11.40	11.40	6.91	6.91	-0.08	1.89
2	23.36	23.36	11.40	11.40	6.91	6.91	-0.02	6.90

Fila	P_1	P_p	W_p	P_d	PT
1	7156	77070	11310	51504	MEDI
1	7156	77070	11310	51504	MINIMI
2	7156	77070	11310	52001	MEDI
2	7156	77070	11310	52001	MINIMI

Verifica della portanza

N	carico verticale in testa al palo in [kg]
P_d	portanza di progetto in [kg]
FS_v	fattori di sicurezza a carichi verticali (rapporto tra P_d/N)
T	carico orizzontale in testa al palo in [kg]
T_d	portanza trasversale di progetto in [kg]
FS_o	fattori di sicurezza a carichi orizzontali (rapporto tra T_d/T)

Fila	N	P_d	FS_v	T	T_d	FS_o
1	-7783	51504	6.618	11417	28607	2.506
2	29203	52001	1.781	11417	28607	2.506

Verifica a punzonamento della fondazione

D	diametro dei pali della fila espresso in [cm]
H _f	altezza della fondazione in corrispondenza della fila espressa in [cm]
S _i	superficie di aderenza palo-fondazione (H _f l ₁ D) espressa in [cmq]
N	sforzo normale trasmesso dal palo alla fondazione espresso in [kg]
τ _c	tensione tangenziale palo-fondazione espressa in [kg/cmq]

Fila	D	H _f	S _i	N	τ _c
1	80.0	40.0	10053.1	-7783	-0.77
2	80.0	40.0	10053.1	29203	2.90

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 13

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
M _u	momento ultimo espresso in [kgm]
N _u	sforzo normale ultimo espresso in [kg]
T _u	taglio ultimo espresso in [kg]
CS	coefficiente di sicurezza

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	-7783	11417	52.28	0	-208559	55705	4.88
2	0.23	-2569	-7492	11350	52.28	33858	-98749	55705	4.91
3	0.45	-5123	-7187	11288	52.28	44889	-62975	55705	4.94
4	0.68	-7662	-6866	11230	52.28	50385	-45147	55705	4.96
5	0.90	-10189	-6527	9228	52.28	53699	-34399	55705	5.27
6	1.13	-12265	-6172	7406	52.28	55669	-28012	55705	4.54
7	1.35	-13932	-5800	5758	52.28	56990	-23726	55705	4.09
8	1.57	-15227	-5412	4277	52.28	57955	-20597	55705	3.81
9	1.80	-16190	-5007	2953	52.28	58707	-18157	55705	3.63
10	2.02	-16854	-4586	1779	52.28	59328	-16144	55705	3.52
11	2.25	-17254	-4149	744	52.28	59867	-14395	55705	3.47
12	2.48	-17422	-3695	-161	52.28	60359	-12802	55705	3.46
13	2.70	-17385	-3225	-944	52.28	60827	-11282	55705	3.50
14	2.93	-17173	-2738	-1617	52.28	61293	-9773	55705	3.57
15	3.15	-16809	-2235	-2187	52.28	61773	-8214	55705	3.67
16	3.38	-16317	-1716	-2666	52.28	62287	-6549	55705	3.82
17	3.60	-15717	-1180	-3060	52.28	62851	-4717	55705	4.00
18	3.83	-15029	-627	-3380	52.28	63489	-2650	55705	4.22
19	4.05	-14268	-59	-3633	52.28	64225	-264	55705	4.50
20	4.28	-13451	527	-3827	52.28	64872	2540	55705	4.82
21	4.50	-12590	1128	-3970	52.28	65617	5880	55705	5.21
22	4.73	-11697	1746	-4068	52.28	66520	9930	55705	5.69
23	4.95	-10781	2380	-4128	52.28	67635	14933	55705	6.27
24	5.17	-9853	3031	-4156	52.28	69042	21241	55705	7.01
25	5.40	-8918	3698	-4157	52.28	70858	29387	55705	7.95
26	5.63	-7982	4382	-4136	52.28	73275	40226	55705	9.18
27	5.85	-7052	5082	-4098	52.28	76437	55088	55705	10.84
28	6.08	-6130	5799	-4046	52.28	80370	76030	55705	13.11
29	6.30	-5219	6131	-3770	52.28	84335	99061	55705	14.78
30	6.53	-4371	6413	-3460	52.28	88915	130459	55705	16.10
31	6.75	-3592	6696	-3129	52.28	94668	176455	55705	17.80
32	6.98	-2888	6979	-2785	52.28	99971	241550	55705	20.00
33	7.20	-2262	7262	-2435	52.28	102179	328057	55705	22.88
34	7.42	-1714	7544	-2084	52.28	97159	427669	55705	26.73
35	7.65	-1245	7827	-1738	52.28	85262	536022	55705	32.06
36	7.88	-854	8110	-1398	52.28	68273	648311	55705	39.84
37	8.10	-539	8393	-1068	52.28	48024	747112	55705	52.17
38	8.33	-299	8675	-748	52.28	26627	771995	55705	74.48
39	8.55	-131	8958	-439	52.28	11411	780646	55705	87.14
40	8.78	-32	9241	-143	52.28	2727	785583	55705	85.01
41	9.00	0	9524	-143	52.28	0	787133	55705	82.65

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	29203	11417	52.28	0	787133	55705	4.88
2	0.23	-2569	29479	11350	52.28	60197	690784	55705	4.91

3	0.45	-5123	29739	11288	52.28	88210	512106	55705	4.94
4	0.68	-7662	29985	11230	52.28	100069	391599	55705	4.96
5	0.90	-10189	30213	9228	52.28	102132	302844	55705	6.04
6	1.13	-12265	30425	7406	52.28	100363	248954	55705	7.52
7	1.35	-13932	30621	5758	52.28	98256	215957	55705	7.05
8	1.57	-15227	30801	4277	52.28	96451	195092	55705	6.33
9	1.80	-16190	30964	2953	52.28	95230	182138	55705	5.88
10	2.02	-16854	31112	1779	52.28	94418	174293	55705	5.60
11	2.25	-17254	31244	744	52.28	93934	170095	55705	5.44
12	2.48	-17422	31360	-161	52.28	93787	168821	55705	5.38
13	2.70	-17385	31460	-944	52.28	93916	169945	55705	5.40
14	2.93	-17173	31543	-1617	52.28	94291	173194	55705	5.49
15	3.15	-16809	31611	-2187	52.28	94881	178431	55705	5.64
16	3.38	-16317	31663	-2666	52.28	95536	185386	55705	5.85
17	3.60	-15717	31699	-3060	52.28	96384	194388	55705	6.13
18	3.83	-15029	31718	-3380	52.28	97408	205581	55705	6.48
19	4.05	-14268	31722	-3633	52.28	98504	218999	55705	6.90
20	4.28	-13451	31710	-3827	52.28	99616	234837	55705	7.41
21	4.50	-12590	31681	-3970	52.28	100582	253106	55705	7.99
22	4.73	-11697	31637	-4068	52.28	101434	274355	55705	8.67
23	4.95	-10781	31577	-4128	52.28	102047	298873	55705	9.47
24	5.17	-9853	31500	-4156	52.28	102179	326675	55705	10.37
25	5.40	-8918	31408	-4157	52.28	101646	357991	55705	11.40
26	5.63	-7982	31299	-4136	52.28	100027	392210	55705	12.53
27	5.85	-7052	31175	-4098	52.28	97040	429000	55705	13.59
28	6.08	-6130	31034	-4046	52.28	92896	470330	55705	13.77
29	6.30	-5219	31269	-3770	52.28	87055	521558	55705	14.78
30	6.53	-4371	31552	-3460	52.28	79812	576114	55705	16.10
31	6.75	-3592	31835	-3129	52.28	71242	631320	55705	17.80
32	6.98	-2888	32117	-2785	52.28	61532	684211	55705	20.00
33	7.20	-2262	32400	-2435	52.28	51183	733212	55705	22.63
34	7.42	-1714	32683	-2084	52.28	40083	764345	55705	23.39
35	7.65	-1245	32965	-1738	52.28	29103	770588	55705	23.38
36	7.88	-854	33248	-1398	52.28	19928	775804	55705	23.33
37	8.10	-539	33531	-1068	52.28	12549	779999	55705	23.26
38	8.33	-299	33814	-748	52.28	6931	783193	55705	23.16
39	8.55	-131	34096	-439	52.28	3016	785419	55705	23.04
40	8.78	-32	34379	-143	52.28	734	786716	55705	22.88
41	9.00	0	34662	-143	52.28	0	787133	55705	22.71

COMBINAZIONE n° 14

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		

Incremento sismico della spinta	4012.63	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	25.24	[°]		

Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	-551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	-539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	11633.71	[kg]		
Risultante dei carichi applicati in dir. verticale	9546.26	[kg]		
Sforzo normale sul piano di posa della fondazione	9546.26	[kg]		
Sforzo tangenziale sul piano di posa della fondazione	11633.71	[kg]		
Eccentricità rispetto al baricentro della fondazione	1.13	[m]		
Lunghezza fondazione reagente	-0.53	[m]		
Risultante in fondazione	15049.07	[kg]		
Inclinazione della risultante (rispetto alla normale)	50.63	[°]		
Momento rispetto al baricentro della fondazione	10747.12	[kgm]		

Sollecitazioni paramento

Combinazione n° 14

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	12.68	207.50
3	0.25	191.59	51.79	427.99
4	0.38	290.45	118.96	661.48
5	0.50	391.36	215.81	908.31
6	0.63	494.32	344.70	1184.65
7	0.75	599.32	510.66	1505.88
8	0.88	706.36	718.21	1852.52
9	1.00	815.45	969.96	2218.32
10	1.13	926.58	1268.19	2602.05
11	1.25	1039.77	1615.10	3002.78
12	1.38	1154.99	2012.75	3419.81
13	1.50	1272.26	2463.13	3852.57
14	1.63	1391.58	2968.18	4300.63
15	1.75	1512.94	3529.78	4763.61
16	1.88	1636.35	4149.77	5241.24
17	2.00	1761.80	4829.96	5733.27
18	2.13	1889.30	5572.12	6239.52
19	2.25	2018.84	6378.03	6759.82
20	2.38	2150.43	7249.42	7294.03
21	2.50	2284.06	8187.94	7839.93

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 14

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-20.74	3.81	-1534.83	2976.97
2	0.07	-170.88	292.58	0.00	2930.16
3	0.13	-147.81	476.45	0.00	3927.74
4	0.20	0.00	741.60	0.00	6706.65
5	0.27	0.00	1052.53	0.00	9492.91
6	0.33	0.00	1382.91	0.00	12412.03
7	0.40	0.00	1836.33	0.00	15581.49
8	0.46	0.00	2689.89	-173.74	18863.72
9	0.52	0.00	3749.26	-1298.44	22478.26
10	0.57	0.00	5049.87	-3443.29	26403.12
11	0.63	0.00	6628.04	-3485.43	29281.24
12	1.06	-5071.17	0.00	-14594.90	0.00
13	1.10	-4494.08	0.00	-14363.47	0.00
14	1.17	-3619.48	0.00	-12673.86	0.00
15	1.23	-2880.05	0.00	-11012.41	0.00
16	1.30	-2249.61	0.00	-9521.92	0.00
17	1.37	-1792.15	0.00	-8267.32	0.00
18	1.43	-1420.47	0.00	-7092.69	0.00
19	1.50	-1084.69	0.00	-5977.95	0.00
20	1.57	-789.85	0.00	-4905.92	0.00
21	1.63	-539.29	0.00	-3861.23	0.00
22	1.70	-334.88	0.00	-2827.83	0.00
23	1.77	-177.14	12.26	-1944.67	0.00
24	1.83	-65.47	43.40	-1144.89	0.00
25	1.90	0.00	8.00	-574.85	169.49

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-1244.00	0.00	-1376.43	496.42
2	0.13	-1162.05	0.00	-4203.38	2890.14
3	0.27	-849.10	0.00	-6886.11	6037.13
4	0.40	-165.55	44.75	-6962.46	8158.98
5	0.50	-10.53	442.34	-6988.79	5621.46
6	0.63	0.00	842.59	-5222.82	3272.91
7	0.77	0.00	1021.19	-3066.51	1565.84
8	0.90	0.00	1063.63	-1018.04	1018.04
9	1.03	0.00	1021.19	-1565.84	3066.51
10	1.17	0.00	842.59	-3272.91	5222.82
11	1.30	-10.53	442.34	-5621.46	6988.79
12	1.40	-165.55	44.75	-8158.98	6962.46
13	1.53	-849.10	0.00	-6037.13	6886.11
14	1.67	-1162.05	0.00	-2890.14	4203.38
15	1.80	-1244.00	0.00	-1376.43	1376.43
16	1.93	-1162.05	0.00	-4203.38	2890.14
17	2.07	-849.10	0.00	-6886.11	6037.13
18	2.20	-165.55	44.75	-6962.46	8158.98
19	2.30	-10.53	442.34	-6988.79	5621.46
20	2.43	0.00	842.59	-5222.82	3272.91
21	2.57	0.00	1021.19	-3066.51	1565.84
22	2.70	0.00	1063.63	-1018.04	1018.04
23	2.83	0.00	1021.19	-1565.84	3066.51
24	2.97	0.00	842.59	-3272.91	5222.82
25	3.10	-10.53	442.34	-5621.46	6988.79
26	3.20	-165.55	44.75	-8158.98	6962.46
27	3.33	-849.10	0.00	-6037.13	6886.11
28	3.47	-1162.05	0.00	-2890.14	4203.38
29	3.60	-1244.00	0.00	-1376.43	1376.43
30	3.73	-1162.05	0.00	-4203.38	2890.14
31	3.87	-849.10	0.00	-6886.11	6037.13
32	4.00	-165.55	44.75	-6962.46	8158.98
33	4.10	-10.53	442.34	-6988.79	5621.46

34	4.23	0.00	842.59	-5222.82	3272.91
35	4.37	0.00	1021.19	-3066.51	1565.84
36	4.50	0.00	1063.63	-1018.04	1018.04
37	4.63	0.00	1021.19	-1565.84	3066.51
38	4.77	0.00	842.59	-3272.91	5222.82
39	4.90	-10.53	442.34	-5621.46	6988.79
40	5.00	-165.55	44.75	-8158.98	6962.46
41	5.13	-849.10	0.00	-6037.13	6886.11
42	5.27	-1162.05	0.00	-2890.14	4203.38
43	5.40	-1244.00	0.00	-1376.43	1376.43
44	5.53	-1162.05	0.00	-4203.38	2890.14
45	5.67	-849.10	0.00	-6886.11	6037.13
46	5.80	-165.55	44.75	-6962.46	8158.98
47	5.90	-10.53	442.34	-6988.79	5621.46
48	6.03	0.00	842.59	-5222.82	3272.91
49	6.17	0.00	1021.19	-3066.51	1565.84
50	6.30	0.00	1063.63	-1018.04	1018.04
51	6.43	0.00	1021.19	-1565.84	3066.51
52	6.57	0.00	842.59	-3272.91	5222.82
53	6.70	-10.53	442.34	-5621.46	6988.79
54	6.80	-165.55	44.75	-8158.98	6962.46
55	6.93	-849.10	0.00	-6037.13	6886.11
56	7.07	-1162.05	0.00	-2890.14	4203.38
57	7.20	-1244.00	0.00	-1376.43	1376.43
58	7.33	-1162.05	0.00	-4203.38	2890.14
59	7.47	-849.10	0.00	-6886.11	6037.13
60	7.60	-165.55	44.75	-6962.46	8158.98
61	7.70	-10.53	442.34	-6988.79	5621.46
62	7.83	0.00	842.59	-5222.82	3272.91
63	7.97	0.00	1021.19	-3066.51	1565.84
64	8.10	0.00	1063.63	-1018.04	1018.04
65	8.23	0.00	1021.19	-1565.84	3066.51
66	8.37	0.00	842.59	-3272.91	5222.82
67	8.50	-10.53	442.34	-5621.46	6988.79
68	8.60	-165.55	44.75	-8158.98	6962.46
69	8.73	-849.10	0.00	-6037.13	6886.11
70	8.87	-1162.05	0.00	-2890.14	4203.38
71	9.00	-1244.00	0.00	-1376.43	1376.43
72	9.13	-1162.05	0.00	-4203.38	2890.14
73	9.27	-849.10	0.00	-6886.11	6037.13
74	9.40	-165.55	44.75	-6962.46	8158.98
75	9.50	-10.53	442.34	-6988.79	5621.46
76	9.63	0.00	842.59	-5222.82	3272.91
77	9.77	0.00	1021.19	-3066.51	1565.84
78	9.90	0.00	1063.63	-1018.04	1018.04
79	10.03	0.00	1021.19	-1565.84	3066.51
80	10.17	0.00	842.59	-3272.91	5222.82
81	10.30	-10.53	442.34	-5621.46	6988.79
82	10.40	-165.55	44.75	-8158.98	6962.46
83	10.53	-849.10	0.00	-6037.13	6886.11
84	10.67	-1162.05	0.00	-2890.14	4203.38
85	10.80	-1244.00	0.00	-1376.43	1376.43
86	10.93	-1162.05	0.00	-4203.38	2890.14
87	11.07	-849.10	0.00	-6886.11	6037.13
88	11.20	-165.55	44.75	-6962.46	8158.98
89	11.30	-10.53	442.34	-6988.79	5621.46
90	11.43	0.00	842.59	-5222.82	3272.91
91	11.57	0.00	1021.19	-3066.51	1565.84
92	11.70	0.00	1063.63	-1018.04	1018.04
93	11.83	0.00	1021.19	-1565.84	3066.51
94	11.97	0.00	842.59	-3272.91	5222.82
95	12.10	-10.53	442.34	-5621.46	6988.79
96	12.20	-165.55	44.75	-8158.98	6962.46
97	12.33	-849.10	0.00	-6037.13	6886.11
98	12.47	-1162.05	0.00	-2890.14	4203.38
99	12.60	-1244.00	0.00	-1376.43	1376.43
100	12.73	-1162.05	0.00	-4203.38	2890.14
101	12.87	-849.10	0.00	-6886.11	6037.13
102	13.00	-165.55	44.75	-6962.46	8158.98
103	13.10	-10.53	442.34	-6988.79	5621.46
104	13.23	0.00	842.59	-5222.82	3272.91
105	13.37	0.00	1021.19	-3066.51	1565.84
106	13.50	0.00	1063.63	-1018.04	1018.04
107	13.63	0.00	1021.19	-1565.84	3066.51
108	13.77	0.00	842.59	-3272.91	5222.82
109	13.90	-10.53	442.34	-5621.46	6988.79
110	14.00	-165.55	44.75	-8158.98	6962.46

111	14.13	-849.10	0.00	-6037.13	6886.11
112	14.27	-1162.05	0.00	-2890.14	4203.38
113	14.40	-1244.00	0.00	-1376.43	1376.43
114	14.53	-1162.05	0.00	-4203.38	2890.14
115	14.67	-849.10	0.00	-6886.11	6037.13
116	14.80	-165.55	44.75	-6962.46	8158.98
117	14.90	-10.53	442.34	-6988.79	5621.46
118	15.03	0.00	842.59	-5222.82	3272.91
119	15.17	0.00	1021.19	-3066.51	1565.84
120	15.30	0.00	1063.63	-1018.04	1018.04
121	15.43	0.00	1021.19	-1565.84	3066.51
122	15.57	0.00	842.59	-3272.91	5222.82
123	15.70	-10.53	442.34	-5621.46	6988.79
124	15.80	-165.55	44.75	-8158.98	6962.46
125	15.93	-849.10	0.00	-6037.13	6886.11
126	16.07	-1162.05	0.00	-2890.14	4203.38
127	16.20	-1244.00	0.00	-1376.43	1376.43
128	16.33	-1162.05	0.00	-4203.38	2890.14
129	16.47	-849.10	0.00	-6886.11	6037.13
130	16.60	-165.55	44.75	-6962.46	8158.98
131	16.70	-10.53	442.34	-6988.79	5621.46
132	16.83	0.00	842.59	-5222.82	3272.91
133	16.97	0.00	1021.19	-3066.51	1565.84
134	17.10	0.00	1063.63	-1018.04	1018.04
135	17.23	0.00	1021.19	-1565.84	3066.51
136	17.37	0.00	842.59	-3272.91	5222.82
137	17.50	-10.53	442.34	-5621.46	6988.79
138	17.60	-165.55	44.75	-8158.98	6962.46
139	17.73	-849.10	0.00	-6037.13	6886.11
140	17.87	-1162.05	0.00	-2890.14	4203.38
141	18.00	-1244.00	0.00	-1376.43	1376.43
142	18.13	-1162.05	0.00	-4203.38	2890.14
143	18.27	-849.10	0.00	-6886.11	6037.13
144	18.40	-165.55	44.75	-6962.46	8158.98
145	18.50	-10.53	442.34	-6988.79	5621.46
146	18.63	0.00	842.59	-5222.82	3272.91
147	18.77	0.00	1021.19	-3066.51	1565.84
148	18.90	0.00	1063.63	-1018.04	1018.04
149	19.03	0.00	1021.19	-1565.84	3066.51
150	19.17	0.00	842.59	-3272.91	5222.82
151	19.30	-10.53	442.34	-5621.46	6988.79
152	19.40	-165.55	44.75	-8158.98	6962.46
153	19.53	-849.10	0.00	-6037.13	6886.11
154	19.67	-1162.05	0.00	-2890.14	4203.38
155	19.80	-1244.00	0.00	-1376.43	1376.43
156	19.93	-1162.05	0.00	-4203.38	2890.14
157	20.07	-849.10	0.00	-6886.11	6037.13
158	20.20	-165.55	44.75	-6962.46	8158.98
159	20.30	-10.53	442.34	-6988.79	5621.46
160	20.43	0.00	842.59	-5222.82	3272.91
161	20.57	0.00	1021.19	-3066.51	1565.84
162	20.70	0.00	1063.63	-1018.04	1018.04
163	20.83	0.00	1021.19	-1565.84	3066.51
164	20.97	0.00	842.59	-3272.91	5222.82
165	21.10	-10.53	442.34	-5621.46	6988.79
166	21.20	-165.55	44.75	-8158.98	6962.46
167	21.33	-849.10	0.00	-6037.13	6886.11
168	21.47	-1162.05	0.00	-2890.14	4203.38
169	21.60	-1244.00	0.00	-1376.43	1376.43
170	21.73	-1162.05	0.00	-4203.38	2890.14
171	21.87	-849.10	0.00	-6886.11	6037.13
172	22.00	-165.55	44.75	-6962.46	8158.98
173	22.10	-10.53	442.34	-6988.79	5621.46
174	22.23	0.00	842.59	-5222.82	3272.91
175	22.37	0.00	1021.19	-3066.51	1565.84
176	22.50	0.00	1063.63	-1018.04	1018.04
177	22.63	0.00	1021.19	-1565.84	3066.51
178	22.77	0.00	842.59	-3272.91	5222.82
179	22.90	-10.53	442.34	-5621.46	6988.79
180	23.00	-165.56	44.75	-8158.99	6962.46
181	23.13	-849.10	0.00	-6037.12	6886.10
182	23.27	-1162.05	0.00	-2890.13	4203.37
183	23.40	-1244.00	0.00	-1376.43	1376.42
184	23.53	-1162.05	0.00	-4203.39	2890.10
185	23.67	-849.11	0.00	-6886.12	6037.10
186	23.80	-165.56	44.75	-6962.48	8158.98
187	23.90	-10.53	442.33	-6988.81	5621.45

188	24.03	0.00	842.58	-5222.85	3272.89
189	24.17	0.00	1021.18	-3066.54	1565.81
190	24.30	0.00	1063.62	-1018.08	1017.99
191	24.43	0.00	1021.18	-1565.88	3066.45
192	24.57	0.00	842.56	-3272.96	5222.74
193	24.70	-10.52	442.31	-5621.54	6988.69
194	24.80	-165.58	44.75	-8159.18	6962.36
195	24.93	-849.15	0.00	-6036.92	6885.98
196	25.07	-1162.11	0.00	-2889.92	4203.21
197	25.20	-1244.07	0.00	-1376.71	1376.21
198	25.33	-1162.15	0.00	-4203.74	2889.07
199	25.47	-849.23	0.00	-6886.58	6036.17
200	25.60	-165.69	44.75	-6963.02	8159.03
201	25.70	-10.52	442.13	-6989.35	5621.05
202	25.83	0.00	842.32	-5223.52	3272.38
203	25.97	0.00	1020.86	-3067.41	1565.19
204	26.10	0.00	1063.22	-1019.20	1016.53
205	26.23	0.00	1020.66	-1567.18	3064.58
206	26.37	0.00	841.89	-3274.51	5220.31
207	26.50	-10.50	441.42	-5623.71	6985.71
208	26.60	-166.47	44.74	-8165.21	6959.39
209	26.73	-850.55	0.00	-6030.72	6882.05
210	26.87	-1163.91	0.00	-2883.54	4198.15
211	27.00	-1246.39	0.00	-1385.06	1369.71
212	27.13	-1164.98	0.00	-4214.48	2857.57
213	27.27	-852.92	0.00	-6900.64	6007.97
214	27.40	-169.70	44.71	-6979.39	8160.71
215	27.50	-10.49	435.93	-7005.76	5608.89
216	27.63	0.00	834.60	-5243.88	3256.71
217	27.77	0.00	1010.96	-3093.78	1831.00
218	27.90	0.00	1051.11	-1053.21	972.81
219	28.03	0.00	1005.00	-1607.98	3009.27
220	28.17	0.00	821.36	-3324.14	5149.01
221	28.30	-9.82	413.84	-5695.30	6898.89
222	28.40	-193.93	45.17	-8365.92	6872.84
223	28.53	-895.32	0.00	-5877.73	6768.32
224	28.67	-1222.65	0.00	-2803.39	4052.29
225	28.80	-1324.42	0.00	-1632.69	1588.86
226	28.93	-1264.41	0.00	-4549.07	1856.08
227	29.07	-987.57	0.00	-7361.88	5075.51
228	29.20	-349.99	38.57	-7332.74	8155.05
229	29.33	-183.28	311.36	-7363.11	4663.71
230	29.47	-155.13	567.38	-5695.71	2132.25
231	29.60	-126.42	616.71	-4090.52	565.02
232	29.73	-96.70	547.09	-2992.91	369.81
233	29.87	-70.60	432.80	-2876.61	662.53
234	30.00	-47.24	17.79	-2911.81	627.22

Armature e tensioni nei materiali del muro

Combinazione n° 14

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
VR _{cd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
VR _{sd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
VR _d	Resistenza al taglio, espresso in [kg]

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Red}	V _{Rsd}
1	0.00	100, 30	10.05	8.04	0	0	1000.00	13007	--	--
2	0.13	100, 31	10.05	8.04	188045	-25157	1984.17	13157	--	--
3	0.25	100, 31	10.05	8.04	70620	-19091	368.60	13305	--	--
4	0.38	100, 32	10.05	8.04	38505	-15771	132.57	13453	--	--
5	0.50	100, 33	10.05	8.04	26473	-14598	67.64	13600	--	--
6	0.63	100, 33	14.07	8.04	27765	-19361	56.17	15369	--	--
7	0.75	100, 34	14.07	8.04	22437	-19118	37.44	15529	--	--
8	0.88	100, 35	14.07	8.04	18746	-19060	26.54	15688	--	--
9	1.00	100, 35	14.07	8.04	16072	-19118	19.71	15847	--	--
10	1.13	100, 36	14.07	8.04	14065	-19251	15.18	16004	--	--
11	1.25	100, 37	14.07	8.04	12513	-19436	12.03	16161	--	--

12	1.38	100, 37	14.07	8.04	11281	-19659	9.77	16317	--	--
13	1.50	100, 38	14.07	8.04	10283	-19909	8.08	16472	--	--
14	1.63	100, 39	14.07	8.04	9460	-20178	6.80	16627	--	--
15	1.75	100, 39	14.07	8.04	8771	-20464	5.80	16780	--	--
16	1.88	100, 40	14.07	8.04	8187	-20761	5.00	16933	--	--
17	2.00	100, 40	28.15	16.08	14993	-41103	8.51	21463	--	--
18	2.13	100, 41	14.07	8.04	7250	-21384	3.84	17237	--	--
19	2.25	100, 42	14.07	8.04	6870	-21705	3.40	17388	--	--
20	2.38	100, 42	14.07	8.04	6535	-22032	3.04	17539	--	--
21	2.50	100, 43	14.07	8.04	6238	-22363	2.73	17689	--	--

Armature e tensioni nei materiali della fondazione

Combinazione n° 14

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione
V _{Rcd}	Aliquota di taglio assorbito dal cls, espresso in [kg]
V _{Rsd}	Aliquota di taglio assorbito dall'armatura, espresso in [kg]
V _{Rd}	Resistenza al taglio, espresso in [kg]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	-11345	546.94	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	38.78	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	23.81	15220	--	--
4	0.20	100, 40	8.04	8.04	0	11345	15.30	15220	--	--
5	0.27	100, 40	8.04	8.04	0	11345	10.78	15220	--	--
6	0.33	100, 40	8.04	8.04	0	11345	8.20	98910	118010	98910
7	0.40	100, 40	8.04	8.04	0	11345	6.18	106555	118010	106555
8	0.46	100, 40	8.04	8.04	0	11345	4.22	15220	--	--
9	0.52	100, 40	8.04	8.04	0	11345	3.03	15220	--	--
10	0.57	100, 40	8.04	8.04	0	11345	2.25	15220	--	--
11	0.63	100, 40	8.04	10.05	0	14108	2.13	15220	--	--

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	Y	B, H	A _{fs}	A _{fi}	N _u	M _u	CS	V _{Rd}	V _{Rcd}	V _{Rsd}
1	0.00	100, 40	8.04	8.04	0	11345	1000.00	15220	--	--
2	0.07	100, 40	8.04	8.04	0	-11345	173.30	15220	--	--
3	0.13	100, 40	8.04	8.04	0	-11345	64.04	15220	--	--
4	0.20	100, 40	8.04	8.04	0	-11345	33.88	15220	--	--
5	0.27	100, 40	8.04	8.04	0	-11345	21.04	15220	--	--
6	0.33	100, 40	8.04	8.04	0	-11345	14.36	15220	--	--
7	0.40	100, 40	8.04	8.04	0	-11345	10.46	15220	--	--
8	0.47	100, 40	8.04	8.04	0	-11345	7.99	15220	--	--
9	0.53	100, 40	8.04	8.04	0	-11345	6.33	15220	--	--
10	0.60	100, 40	8.04	8.04	0	-11345	5.04	15220	--	--
11	0.67	100, 40	8.04	8.04	0	-11345	3.94	15220	--	--
12	0.73	100, 40	8.04	8.04	0	-11345	3.13	15220	--	--
13	0.80	100, 40	8.04	8.04	0	-11345	2.52	15220	--	--
14	0.84	100, 40	8.04	8.04	0	-11345	2.24	15220	--	--

Armature e tensioni piastre

Combinazione n° 14

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	8.90
2	0.13	2.83	2.83	0	-4090	9.49

3	0.27	2.83	2.83	0	-4090	12.24
4	0.40	2.83	2.83	0	-4090	26.09
5	0.50	2.83	2.83	0	4090	55.35
6	0.63	2.83	2.83	0	4090	12.21
7	0.77	2.83	2.83	0	4090	8.63
8	0.90	2.83	2.83	0	4090	7.93
9	1.03	2.83	2.83	0	4090	8.63
10	1.17	2.83	2.83	0	4090	12.21
11	1.30	2.83	2.83	0	4090	55.35
12	1.40	2.83	2.83	0	-4090	26.09
13	1.53	2.83	2.83	0	-4090	12.24
14	1.67	2.83	2.83	0	-4090	9.49
15	1.80	2.83	2.83	0	-4090	8.90
16	1.93	2.83	2.83	0	-4090	9.49
17	2.07	2.83	2.83	0	-4090	12.24
18	2.20	2.83	2.83	0	-4090	26.09
19	2.30	2.83	2.83	0	4090	55.35
20	2.43	2.83	2.83	0	4090	12.21
21	2.57	2.83	2.83	0	4090	8.63
22	2.70	2.83	2.83	0	4090	7.93
23	2.83	2.83	2.83	0	4090	8.63
24	2.97	2.83	2.83	0	4090	12.21
25	3.10	2.83	2.83	0	4090	55.35
26	3.20	2.83	2.83	0	-4090	26.09
27	3.33	2.83	2.83	0	-4090	12.24
28	3.47	2.83	2.83	0	-4090	9.49
29	3.60	2.83	2.83	0	-4090	8.90
30	3.73	2.83	2.83	0	-4090	9.49
31	3.87	2.83	2.83	0	-4090	12.24
32	4.00	2.83	2.83	0	-4090	26.09
33	4.10	2.83	2.83	0	4090	55.35
34	4.23	2.83	2.83	0	4090	12.21
35	4.37	2.83	2.83	0	4090	8.63
36	4.50	2.83	2.83	0	4090	7.93
37	4.63	2.83	2.83	0	4090	8.63
38	4.77	2.83	2.83	0	4090	12.21
39	4.90	2.83	2.83	0	4090	55.35
40	5.00	2.83	2.83	0	-4090	26.09
41	5.13	2.83	2.83	0	-4090	12.24
42	5.27	2.83	2.83	0	-4090	9.49
43	5.40	2.83	2.83	0	-4090	8.90
44	5.53	2.83	2.83	0	-4090	9.49
45	5.67	2.83	2.83	0	-4090	12.24
46	5.80	2.83	2.83	0	-4090	26.09
47	5.90	2.83	2.83	0	4090	55.35
48	6.03	2.83	2.83	0	4090	12.21
49	6.17	2.83	2.83	0	4090	8.63
50	6.30	2.83	2.83	0	4090	7.93
51	6.43	2.83	2.83	0	4090	8.63
52	6.57	2.83	2.83	0	4090	12.21
53	6.70	2.83	2.83	0	4090	55.35
54	6.80	2.83	2.83	0	-4090	26.09
55	6.93	2.83	2.83	0	-4090	12.24
56	7.07	2.83	2.83	0	-4090	9.49
57	7.20	2.83	2.83	0	-4090	8.90
58	7.33	2.83	2.83	0	-4090	9.49
59	7.47	2.83	2.83	0	-4090	12.24
60	7.60	2.83	2.83	0	-4090	26.09
61	7.70	2.83	2.83	0	4090	55.35
62	7.83	2.83	2.83	0	4090	12.21
63	7.97	2.83	2.83	0	4090	8.63
64	8.10	2.83	2.83	0	4090	7.93
65	8.23	2.83	2.83	0	4090	8.63
66	8.37	2.83	2.83	0	4090	12.21
67	8.50	2.83	2.83	0	4090	55.35
68	8.60	2.83	2.83	0	-4090	26.09
69	8.73	2.83	2.83	0	-4090	12.24
70	8.87	2.83	2.83	0	-4090	9.49
71	9.00	2.83	2.83	0	-4090	8.90
72	9.13	2.83	2.83	0	-4090	9.49
73	9.27	2.83	2.83	0	-4090	12.24
74	9.40	2.83	2.83	0	-4090	26.09
75	9.50	2.83	2.83	0	4090	55.35
76	9.63	2.83	2.83	0	4090	12.21
77	9.77	2.83	2.83	0	4090	8.63
78	9.90	2.83	2.83	0	4090	7.93
79	10.03	2.83	2.83	0	4090	8.63

80	10.17	2.83	2.83	0	4090	12.21
81	10.30	2.83	2.83	0	4090	55.35
82	10.40	2.83	2.83	0	-4090	26.09
83	10.53	2.83	2.83	0	-4090	12.24
84	10.67	2.83	2.83	0	-4090	9.49
85	10.80	2.83	2.83	0	-4090	8.90
86	10.93	2.83	2.83	0	-4090	9.49
87	11.07	2.83	2.83	0	-4090	12.24
88	11.20	2.83	2.83	0	-4090	26.09
89	11.30	2.83	2.83	0	4090	55.35
90	11.43	2.83	2.83	0	4090	12.21
91	11.57	2.83	2.83	0	4090	8.63
92	11.70	2.83	2.83	0	4090	7.93
93	11.83	2.83	2.83	0	4090	8.63
94	11.97	2.83	2.83	0	4090	12.21
95	12.10	2.83	2.83	0	4090	55.35
96	12.20	2.83	2.83	0	-4090	26.09
97	12.33	2.83	2.83	0	-4090	12.24
98	12.47	2.83	2.83	0	-4090	9.49
99	12.60	2.83	2.83	0	-4090	8.90
100	12.73	2.83	2.83	0	-4090	9.49
101	12.87	2.83	2.83	0	-4090	12.24
102	13.00	2.83	2.83	0	-4090	26.09
103	13.10	2.83	2.83	0	4090	55.35
104	13.23	2.83	2.83	0	4090	12.21
105	13.37	2.83	2.83	0	4090	8.63
106	13.50	2.83	2.83	0	4090	7.93
107	13.63	2.83	2.83	0	4090	8.63
108	13.77	2.83	2.83	0	4090	12.21
109	13.90	2.83	2.83	0	4090	55.35
110	14.00	2.83	2.83	0	-4090	26.09
111	14.13	2.83	2.83	0	-4090	12.24
112	14.27	2.83	2.83	0	-4090	9.49
113	14.40	2.83	2.83	0	-4090	8.90
114	14.53	2.83	2.83	0	-4090	9.49
115	14.67	2.83	2.83	0	-4090	12.24
116	14.80	2.83	2.83	0	-4090	26.09
117	14.90	2.83	2.83	0	4090	55.35
118	15.03	2.83	2.83	0	4090	12.21
119	15.17	2.83	2.83	0	4090	8.63
120	15.30	2.83	2.83	0	4090	7.93
121	15.43	2.83	2.83	0	4090	8.63
122	15.57	2.83	2.83	0	4090	12.21
123	15.70	2.83	2.83	0	4090	55.35
124	15.80	2.83	2.83	0	-4090	26.09
125	15.93	2.83	2.83	0	-4090	12.24
126	16.07	2.83	2.83	0	-4090	9.49
127	16.20	2.83	2.83	0	-4090	8.90
128	16.33	2.83	2.83	0	-4090	9.49
129	16.47	2.83	2.83	0	-4090	12.24
130	16.60	2.83	2.83	0	-4090	26.09
131	16.70	2.83	2.83	0	4090	55.35
132	16.83	2.83	2.83	0	4090	12.21
133	16.97	2.83	2.83	0	4090	8.63
134	17.10	2.83	2.83	0	4090	7.93
135	17.23	2.83	2.83	0	4090	8.63
136	17.37	2.83	2.83	0	4090	12.21
137	17.50	2.83	2.83	0	4090	55.35
138	17.60	2.83	2.83	0	-4090	26.09
139	17.73	2.83	2.83	0	-4090	12.24
140	17.87	2.83	2.83	0	-4090	9.49
141	18.00	2.83	2.83	0	-4090	8.90
142	18.13	2.83	2.83	0	-4090	9.49
143	18.27	2.83	2.83	0	-4090	12.24
144	18.40	2.83	2.83	0	-4090	26.09
145	18.50	2.83	2.83	0	4090	55.35
146	18.63	2.83	2.83	0	4090	12.21
147	18.77	2.83	2.83	0	4090	8.63
148	18.90	2.83	2.83	0	4090	7.93
149	19.03	2.83	2.83	0	4090	8.63
150	19.17	2.83	2.83	0	4090	12.21
151	19.30	2.83	2.83	0	4090	55.35
152	19.40	2.83	2.83	0	-4090	26.09
153	19.53	2.83	2.83	0	-4090	12.24
154	19.67	2.83	2.83	0	-4090	9.49
155	19.80	2.83	2.83	0	-4090	8.90
156	19.93	2.83	2.83	0	-4090	9.49

157	20.07	2.83	2.83	0	-4090	12.24
158	20.20	2.83	2.83	0	-4090	26.09
159	20.30	2.83	2.83	0	4090	55.35
160	20.43	2.83	2.83	0	4090	12.21
161	20.57	2.83	2.83	0	4090	8.63
162	20.70	2.83	2.83	0	4090	7.93
163	20.83	2.83	2.83	0	4090	8.63
164	20.97	2.83	2.83	0	4090	12.21
165	21.10	2.83	2.83	0	4090	55.35
166	21.20	2.83	2.83	0	-4090	26.09
167	21.33	2.83	2.83	0	-4090	12.24
168	21.47	2.83	2.83	0	-4090	9.49
169	21.60	2.83	2.83	0	-4090	8.90
170	21.73	2.83	2.83	0	-4090	9.49
171	21.87	2.83	2.83	0	-4090	12.24
172	22.00	2.83	2.83	0	-4090	26.09
173	22.10	2.83	2.83	0	4090	55.34
174	22.23	2.83	2.83	0	4090	12.21
175	22.37	2.83	2.83	0	4090	8.63
176	22.50	2.83	2.83	0	4090	7.93
177	22.63	2.83	2.83	0	4090	8.63
178	22.77	2.83	2.83	0	4090	12.21
179	22.90	2.83	2.83	0	4090	55.30
180	23.00	2.83	2.83	0	-4090	26.11
181	23.13	2.83	2.83	0	-4090	12.25
182	23.27	2.83	2.83	0	-4090	9.49
183	23.40	2.83	2.83	0	-4090	8.90
184	23.53	2.83	2.83	0	-4090	9.49
185	23.67	2.83	2.83	0	-4090	12.25
186	23.80	2.83	2.83	0	-4090	26.14
187	23.90	2.83	2.83	0	4090	55.14
188	24.03	2.83	2.83	0	4090	12.20
189	24.17	2.83	2.83	0	4090	8.62
190	24.30	2.83	2.83	0	4090	7.92
191	24.43	2.83	2.83	0	4090	8.62
192	24.57	2.83	2.83	0	4090	12.18
193	24.70	2.83	2.83	0	4090	54.69
194	24.80	2.83	2.83	0	-4090	26.30
195	24.93	2.83	2.83	0	-4090	12.30
196	25.07	2.83	2.83	0	-4090	9.53
197	25.20	2.83	2.83	0	-4090	8.94
198	25.33	2.83	2.83	0	-4090	9.54
199	25.47	2.83	2.83	0	-4090	12.36
200	25.60	2.83	2.83	0	-4090	26.73
201	25.70	2.83	2.83	0	4090	52.70
202	25.83	2.83	2.83	0	4090	12.03
203	25.97	2.83	2.83	0	4090	8.52
204	26.10	2.83	2.83	0	4090	7.81
205	26.23	2.83	2.83	0	4090	8.47
206	26.37	2.83	2.83	0	4090	11.83
207	26.50	2.83	2.83	0	4090	47.68
208	26.60	2.83	2.83	0	-4090	29.08
209	26.73	2.83	2.83	0	-4090	12.99
210	26.87	2.83	2.83	0	-4090	10.02
211	27.00	2.83	2.83	0	-4090	9.46
212	27.13	2.83	2.83	0	-4090	10.28
213	27.27	2.83	2.83	0	-4090	13.95
214	27.40	2.83	2.83	0	-4090	38.71
215	27.50	2.83	2.83	0	4090	31.77
216	27.63	2.83	2.83	0	4090	10.06
217	27.77	2.83	2.83	0	4090	7.30
218	27.90	2.83	2.83	0	4090	6.59
219	28.03	2.83	2.83	0	4090	6.85
220	28.17	2.83	2.83	0	4090	8.48
221	28.30	2.83	2.83	0	4090	16.92
222	28.40	2.83	2.83	0	-4090	90.55
223	28.53	2.83	2.83	0	-4090	33.36
224	28.67	2.83	2.83	0	-4090	19.58
225	28.80	2.83	2.83	0	-4090	16.77
226	28.93	2.83	2.83	0	-4090	16.52
227	29.07	2.83	2.83	0	-4090	17.53
228	29.20	2.83	2.83	0	-4090	19.49
229	29.33	2.83	2.83	0	-4090	22.31
230	29.47	2.83	2.83	0	-4090	26.36
231	29.60	2.83	2.83	0	4090	32.35
232	29.73	2.83	2.83	0	-4090	42.30
233	29.87	2.83	2.83	0	4090	57.93

234	30.00	2.83	2.83	0	4090	229.86
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Piastra fondazione valle

Nr.	X	A _R	A _{ri}	N _u	M _u	CS
1	0.00	2.83	2.83	0	-4090	3.29
2	0.13	2.83	2.83	0	-4090	3.52
3	0.27	2.83	2.83	0	-4090	4.82
4	0.40	2.83	2.83	0	-4090	24.70
5	0.50	2.83	2.83	0	4090	9.25
6	0.63	2.83	2.83	0	4090	4.85
7	0.77	2.83	2.83	0	4090	4.00
8	0.90	2.83	2.83	0	4090	3.85
9	1.03	2.83	2.83	0	4090	4.00
10	1.17	2.83	2.83	0	4090	4.85
11	1.30	2.83	2.83	0	4090	9.25
12	1.40	2.83	2.83	0	-4090	24.70
13	1.53	2.83	2.83	0	-4090	4.82
14	1.67	2.83	2.83	0	-4090	3.52
15	1.80	2.83	2.83	0	-4090	3.29
16	1.93	2.83	2.83	0	-4090	3.52
17	2.07	2.83	2.83	0	-4090	4.82
18	2.20	2.83	2.83	0	-4090	24.70
19	2.30	2.83	2.83	0	4090	9.25
20	2.43	2.83	2.83	0	4090	4.85
21	2.57	2.83	2.83	0	4090	4.00
22	2.70	2.83	2.83	0	4090	3.85
23	2.83	2.83	2.83	0	4090	4.00
24	2.97	2.83	2.83	0	4090	4.85
25	3.10	2.83	2.83	0	4090	9.25
26	3.20	2.83	2.83	0	-4090	24.70
27	3.33	2.83	2.83	0	-4090	4.82
28	3.47	2.83	2.83	0	-4090	3.52
29	3.60	2.83	2.83	0	-4090	3.29
30	3.73	2.83	2.83	0	-4090	3.52
31	3.87	2.83	2.83	0	-4090	4.82
32	4.00	2.83	2.83	0	-4090	24.70
33	4.10	2.83	2.83	0	4090	9.25
34	4.23	2.83	2.83	0	4090	4.85
35	4.37	2.83	2.83	0	4090	4.00
36	4.50	2.83	2.83	0	4090	3.85
37	4.63	2.83	2.83	0	4090	4.00
38	4.77	2.83	2.83	0	4090	4.85
39	4.90	2.83	2.83	0	4090	9.25
40	5.00	2.83	2.83	0	-4090	24.70
41	5.13	2.83	2.83	0	-4090	4.82
42	5.27	2.83	2.83	0	-4090	3.52
43	5.40	2.83	2.83	0	-4090	3.29
44	5.53	2.83	2.83	0	-4090	3.52
45	5.67	2.83	2.83	0	-4090	4.82
46	5.80	2.83	2.83	0	-4090	24.70
47	5.90	2.83	2.83	0	4090	9.25
48	6.03	2.83	2.83	0	4090	4.85
49	6.17	2.83	2.83	0	4090	4.00
50	6.30	2.83	2.83	0	4090	3.85
51	6.43	2.83	2.83	0	4090	4.00
52	6.57	2.83	2.83	0	4090	4.85
53	6.70	2.83	2.83	0	4090	9.25
54	6.80	2.83	2.83	0	-4090	24.70
55	6.93	2.83	2.83	0	-4090	4.82
56	7.07	2.83	2.83	0	-4090	3.52
57	7.20	2.83	2.83	0	-4090	3.29
58	7.33	2.83	2.83	0	-4090	3.52
59	7.47	2.83	2.83	0	-4090	4.82
60	7.60	2.83	2.83	0	-4090	24.70
61	7.70	2.83	2.83	0	4090	9.25
62	7.83	2.83	2.83	0	4090	4.85
63	7.97	2.83	2.83	0	4090	4.00
64	8.10	2.83	2.83	0	4090	3.85
65	8.23	2.83	2.83	0	4090	4.00
66	8.37	2.83	2.83	0	4090	4.85
67	8.50	2.83	2.83	0	4090	9.25
68	8.60	2.83	2.83	0	-4090	24.70
69	8.73	2.83	2.83	0	-4090	4.82
70	8.87	2.83	2.83	0	-4090	3.52
71	9.00	2.83	2.83	0	-4090	3.29
72	9.13	2.83	2.83	0	-4090	3.52

73	9.27	2.83	2.83	0	-4090	4.82
74	9.40	2.83	2.83	0	-4090	24.70
75	9.50	2.83	2.83	0	4090	9.25
76	9.63	2.83	2.83	0	4090	4.85
77	9.77	2.83	2.83	0	4090	4.00
78	9.90	2.83	2.83	0	4090	3.85
79	10.03	2.83	2.83	0	4090	4.00
80	10.17	2.83	2.83	0	4090	4.85
81	10.30	2.83	2.83	0	4090	9.25
82	10.40	2.83	2.83	0	-4090	24.70
83	10.53	2.83	2.83	0	-4090	4.82
84	10.67	2.83	2.83	0	-4090	3.52
85	10.80	2.83	2.83	0	-4090	3.29
86	10.93	2.83	2.83	0	-4090	3.52
87	11.07	2.83	2.83	0	-4090	4.82
88	11.20	2.83	2.83	0	-4090	24.70
89	11.30	2.83	2.83	0	4090	9.25
90	11.43	2.83	2.83	0	4090	4.85
91	11.57	2.83	2.83	0	4090	4.00
92	11.70	2.83	2.83	0	4090	3.85
93	11.83	2.83	2.83	0	4090	4.00
94	11.97	2.83	2.83	0	4090	4.85
95	12.10	2.83	2.83	0	4090	9.25
96	12.20	2.83	2.83	0	-4090	24.70
97	12.33	2.83	2.83	0	-4090	4.82
98	12.47	2.83	2.83	0	-4090	3.52
99	12.60	2.83	2.83	0	-4090	3.29
100	12.73	2.83	2.83	0	-4090	3.52
101	12.87	2.83	2.83	0	-4090	4.82
102	13.00	2.83	2.83	0	-4090	24.70
103	13.10	2.83	2.83	0	4090	9.25
104	13.23	2.83	2.83	0	4090	4.85
105	13.37	2.83	2.83	0	4090	4.00
106	13.50	2.83	2.83	0	4090	3.85
107	13.63	2.83	2.83	0	4090	4.00
108	13.77	2.83	2.83	0	4090	4.85
109	13.90	2.83	2.83	0	4090	9.25
110	14.00	2.83	2.83	0	-4090	24.70
111	14.13	2.83	2.83	0	-4090	4.82
112	14.27	2.83	2.83	0	-4090	3.52
113	14.40	2.83	2.83	0	-4090	3.29
114	14.53	2.83	2.83	0	-4090	3.52
115	14.67	2.83	2.83	0	-4090	4.82
116	14.80	2.83	2.83	0	-4090	24.70
117	14.90	2.83	2.83	0	4090	9.25
118	15.03	2.83	2.83	0	4090	4.85
119	15.17	2.83	2.83	0	4090	4.00
120	15.30	2.83	2.83	0	4090	3.85
121	15.43	2.83	2.83	0	4090	4.00
122	15.57	2.83	2.83	0	4090	4.85
123	15.70	2.83	2.83	0	4090	9.25
124	15.80	2.83	2.83	0	-4090	24.70
125	15.93	2.83	2.83	0	-4090	4.82
126	16.07	2.83	2.83	0	-4090	3.52
127	16.20	2.83	2.83	0	-4090	3.29
128	16.33	2.83	2.83	0	-4090	3.52
129	16.47	2.83	2.83	0	-4090	4.82
130	16.60	2.83	2.83	0	-4090	24.70
131	16.70	2.83	2.83	0	4090	9.25
132	16.83	2.83	2.83	0	4090	4.85
133	16.97	2.83	2.83	0	4090	4.00
134	17.10	2.83	2.83	0	4090	3.85
135	17.23	2.83	2.83	0	4090	4.00
136	17.37	2.83	2.83	0	4090	4.85
137	17.50	2.83	2.83	0	4090	9.25
138	17.60	2.83	2.83	0	-4090	24.70
139	17.73	2.83	2.83	0	-4090	4.82
140	17.87	2.83	2.83	0	-4090	3.52
141	18.00	2.83	2.83	0	-4090	3.29
142	18.13	2.83	2.83	0	-4090	3.52
143	18.27	2.83	2.83	0	-4090	4.82
144	18.40	2.83	2.83	0	-4090	24.70
145	18.50	2.83	2.83	0	4090	9.25
146	18.63	2.83	2.83	0	4090	4.85
147	18.77	2.83	2.83	0	4090	4.00
148	18.90	2.83	2.83	0	4090	3.85
149	19.03	2.83	2.83	0	4090	4.00

150	19.17	2.83	2.83	0	4090	4.85
151	19.30	2.83	2.83	0	4090	9.25
152	19.40	2.83	2.83	0	-4090	24.70
153	19.53	2.83	2.83	0	-4090	4.82
154	19.67	2.83	2.83	0	-4090	3.52
155	19.80	2.83	2.83	0	-4090	3.29
156	19.93	2.83	2.83	0	-4090	3.52
157	20.07	2.83	2.83	0	-4090	4.82
158	20.20	2.83	2.83	0	-4090	24.70
159	20.30	2.83	2.83	0	4090	9.25
160	20.43	2.83	2.83	0	4090	4.85
161	20.57	2.83	2.83	0	4090	4.00
162	20.70	2.83	2.83	0	4090	3.85
163	20.83	2.83	2.83	0	4090	4.00
164	20.97	2.83	2.83	0	4090	4.85
165	21.10	2.83	2.83	0	4090	9.25
166	21.20	2.83	2.83	0	-4090	24.70
167	21.33	2.83	2.83	0	-4090	4.82
168	21.47	2.83	2.83	0	-4090	3.52
169	21.60	2.83	2.83	0	-4090	3.29
170	21.73	2.83	2.83	0	-4090	3.52
171	21.87	2.83	2.83	0	-4090	4.82
172	22.00	2.83	2.83	0	-4090	24.70
173	22.10	2.83	2.83	0	4090	9.25
174	22.23	2.83	2.83	0	4090	4.85
175	22.37	2.83	2.83	0	4090	4.00
176	22.50	2.83	2.83	0	4090	3.85
177	22.63	2.83	2.83	0	4090	4.00
178	22.77	2.83	2.83	0	4090	4.85
179	22.90	2.83	2.83	0	4090	9.25
180	23.00	2.83	2.83	0	-4090	24.70
181	23.13	2.83	2.83	0	-4090	4.82
182	23.27	2.83	2.83	0	-4090	3.52
183	23.40	2.83	2.83	0	-4090	3.29
184	23.53	2.83	2.83	0	-4090	3.52
185	23.67	2.83	2.83	0	-4090	4.82
186	23.80	2.83	2.83	0	-4090	24.70
187	23.90	2.83	2.83	0	4090	9.25
188	24.03	2.83	2.83	0	4090	4.85
189	24.17	2.83	2.83	0	4090	4.00
190	24.30	2.83	2.83	0	4090	3.85
191	24.43	2.83	2.83	0	4090	4.00
192	24.57	2.83	2.83	0	4090	4.85
193	24.70	2.83	2.83	0	4090	9.25
194	24.80	2.83	2.83	0	-4090	24.70
195	24.93	2.83	2.83	0	-4090	4.82
196	25.07	2.83	2.83	0	-4090	3.52
197	25.20	2.83	2.83	0	-4090	3.29
198	25.33	2.83	2.83	0	-4090	3.52
199	25.47	2.83	2.83	0	-4090	4.82
200	25.60	2.83	2.83	0	-4090	24.68
201	25.70	2.83	2.83	0	4090	9.25
202	25.83	2.83	2.83	0	4090	4.86
203	25.97	2.83	2.83	0	4090	4.01
204	26.10	2.83	2.83	0	4090	3.85
205	26.23	2.83	2.83	0	4090	4.01
206	26.37	2.83	2.83	0	4090	4.86
207	26.50	2.83	2.83	0	4090	9.27
208	26.60	2.83	2.83	0	-4090	24.57
209	26.73	2.83	2.83	0	-4090	4.81
210	26.87	2.83	2.83	0	-4090	3.51
211	27.00	2.83	2.83	0	-4090	3.28
212	27.13	2.83	2.83	0	-4090	3.51
213	27.27	2.83	2.83	0	-4090	4.80
214	27.40	2.83	2.83	0	-4090	24.10
215	27.50	2.83	2.83	0	4090	9.38
216	27.63	2.83	2.83	0	4090	4.90
217	27.77	2.83	2.83	0	4090	4.05
218	27.90	2.83	2.83	0	4090	3.89
219	28.03	2.83	2.83	0	4090	4.07
220	28.17	2.83	2.83	0	4090	4.98
221	28.30	2.83	2.83	0	4090	9.88
222	28.40	2.83	2.83	0	-4090	21.09
223	28.53	2.83	2.83	0	-4090	4.57
224	28.67	2.83	2.83	0	-4090	3.35
225	28.80	2.83	2.83	0	-4090	3.09
226	28.93	2.83	2.83	0	-4090	3.23

227	29.07	2.83	2.83	0	-4090	4.14
228	29.20	2.83	2.83	0	-4090	11.69
229	29.33	2.83	2.83	0	4090	13.14
230	29.47	2.83	2.83	0	4090	7.21
231	29.60	2.83	2.83	0	4090	6.63
232	29.73	2.83	2.83	0	4090	7.48
233	29.87	2.83	2.83	0	4090	9.45
234	30.00	2.83	2.83	0	-4090	86.58

Analisi dei pali

Combinazione n° 14

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	11633.7
Verticale	[kg]	9546.3
Momento	[kgm]	-10747.1

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.37027
Verticale	[cm]	0.00478
Rotazione	[°]	-0.01042

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]	Tr [kg]	Mr [kgm]
1	32	-9378	10739	0	37189	0
2	33	26450	10739	0	37189	0

Dettagli calcolo della portanza

τ_m	tensione tangenziale media palo-terreno in [kg/cm ²]
σ_p	tensione sul terreno alla punta del palo in [kg/cm ²]
N_c, N_q, N_γ	fattori di capacità portante
N'_c, N'_q, N'_γ	fattori di capacità portante corretti
P_1	portanza caratteristica per attrito e aderenza laterale in [kg]
P_p	portanza caratteristica di punta in [kg]
P_d	portanza di progetto, in [kg]
W_p	peso del palo, in [kg]
T_d	portanza trasversale di progetto, espresso in [kg]
PT	Parametri Terreno utilizzati

Fila	N_c	N'_c	N_q	N'_q	N_γ	N'_γ	τ_m	σ_p
1	23.36	23.36	11.40	11.40	6.91	6.91	-0.06	1.04
2	23.36	23.36	11.40	11.40	6.91	6.91	-0.03	6.43

Fila	P_1	P_p	W_p	P_d	PT
1	7156	77070	11310	51504	MEDI
1	7156	77070	11310	51504	MINIMI
2	7156	77070	11310	52001	MEDI
2	7156	77070	11310	52001	MINIMI

Verifica della portanza

N	carico verticale in testa al palo in [kg]
P_d	portanza di progetto in [kg]
FS_v	fattori di sicurezza a carichi verticali (rapporto tra P_d/N)
T	carico orizzontale in testa al palo in [kg]
T_d	portanza trasversale di progetto in [kg]
FS_o	fattori di sicurezza a carichi orizzontali (rapporto tra T_d/T)

Fila	N	P_d	FS_v	T	T_d	FS_o
1	-9378	51504	5.492	10739	28607	2.664
2	26450	52001	1.966	10739	28607	2.664

Verifica a punzonamento della fondazione

D	diametro dei pali della fila espresso in [cm]
H _f	altezza della fondazione in corrispondenza della fila espressa in [cm]
S _i	superficie di aderenza palo-fondazione (H _f ID) espressa in [cmq]
N	sforzo normale trasmesso dal palo alla fondazione espresso in [kg]
τ _c	tensione tangenziale palo-fondazione espressa in [kg/cmq]

Fila	D	H _f	S _i	N	τ _c
1	80.0	40.0	10053.1	-9378	-0.93
2	80.0	40.0	10053.1	26450	2.63

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 14

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
M _u	momento ultimo espresso in [kgm]
N _u	sforzo normale ultimo espresso in [kg]
T _u	taglio ultimo espresso in [kg]
CS	coefficiente di sicurezza

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	-9378	10739	52.28	0	-208559	55705	5.19
2	0.23	-2416	-9091	10675	52.28	29770	-112007	55705	5.22
3	0.45	-4818	-8795	10617	52.28	41147	-75111	55705	5.25
4	0.68	-7207	-8492	10563	52.28	47169	-55578	55705	5.27
5	0.90	-9584	-8178	8680	52.28	50910	-43445	55705	5.31
6	1.13	-11537	-7856	6966	52.28	53147	-36191	55705	4.61
7	1.35	-13104	-7524	5416	52.28	54633	-31371	55705	4.17
8	1.57	-14323	-7184	4023	52.28	55693	-27934	55705	3.89
9	1.80	-15228	-6834	2778	52.28	56489	-25353	55705	3.71
10	2.02	-15853	-6476	1673	52.28	57112	-23331	55705	3.60
11	2.25	-16229	-6109	700	52.28	57619	-21687	55705	3.55
12	2.48	-16387	-5732	-151	52.28	58045	-20305	55705	3.54
13	2.70	-16353	-5347	-888	52.28	58417	-19100	55705	3.57
14	2.93	-16153	-4952	-1521	52.28	58752	-18013	55705	3.64
15	3.15	-15811	-4549	-2058	52.28	59066	-16994	55705	3.74
16	3.38	-15348	-4136	-2507	52.28	59372	-16001	55705	3.87
17	3.60	-14783	-3715	-2878	52.28	59682	-14997	55705	4.04
18	3.83	-14136	-3285	-3179	52.28	60007	-13943	55705	4.25
19	4.05	-13421	-2845	-3417	52.28	60360	-12796	55705	4.50
20	4.28	-12652	-2397	-3600	52.28	60757	-11510	55705	4.80
21	4.50	-11842	-1939	-3734	52.28	61215	-10025	55705	5.17
22	4.73	-11002	-1473	-3826	52.28	61756	-8268	55705	5.61
23	4.95	-10141	-998	-3883	52.28	62413	-6140	55705	6.15
24	5.17	-9267	-513	-3909	52.28	63226	-3502	55705	6.82
25	5.40	-8388	-20	-3910	52.28	64259	-153	55705	7.66
26	5.63	-7508	482	-3890	52.28	65241	4192	55705	8.69
27	5.85	-6633	994	-3855	52.28	66528	9967	55705	10.03
28	6.08	-5765	1514	-3806	52.28	68305	17937	55705	11.85
29	6.30	-4909	1824	-3546	52.28	70113	26047	55705	14.28
30	6.53	-4111	2106	-3255	52.28	72599	37198	55705	17.11
31	6.75	-3379	2389	-2943	52.28	76212	53889	55705	18.93
32	6.98	-2717	2672	-2619	52.28	80998	79664	55705	21.27
33	7.20	-2127	2955	-2290	52.28	87693	121799	55705	24.32
34	7.42	-1612	3237	-1960	52.28	96288	193369	55705	28.42
35	7.65	-1171	3520	-1634	52.28	102172	307139	55705	34.08
36	7.88	-803	3803	-1315	52.28	95013	449813	55705	42.36
37	8.10	-507	4086	-1004	52.28	75299	606307	55705	55.47
38	8.33	-281	4368	-703	52.28	48110	746737	55705	79.18
39	8.55	-123	4651	-413	52.28	20534	775459	55705	134.78
40	8.78	-30	4934	-134	52.28	4796	784407	55705	158.98
41	9.00	0	5217	-134	52.28	0	787133	55705	150.89

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	M _u	N _u	T _u	CS
1	0.00	0	26450	10739	52.28	0	787133	55705	5.19
2	0.23	-2416	26726	10675	52.28	61754	683061	55705	5.22

3	0.45	-4818	26988	10617	52.28	89483	501220	55705	5.25
4	0.68	-7207	27236	10563	52.28	100796	380919	55705	5.27
5	0.90	-9584	27468	8680	52.28	101902	292064	55705	6.42
6	1.13	-11537	27685	6966	52.28	99871	239665	55705	8.00
7	1.35	-13104	27887	5416	52.28	97578	207655	55705	7.45
8	1.57	-14323	28073	4023	52.28	95753	187682	55705	6.69
9	1.80	-15228	28245	2778	52.28	94541	175361	55705	6.21
10	2.02	-15853	28402	1673	52.28	93672	167827	55705	5.91
11	2.25	-16229	28544	700	52.28	93227	163972	55705	5.74
12	2.48	-16387	28672	-151	52.28	93104	162905	55705	5.68
13	2.70	-16353	28784	-888	52.28	93246	164131	55705	5.70
14	2.93	-16153	28881	-1521	52.28	93622	167397	55705	5.80
15	3.15	-15811	28963	-2058	52.28	94224	172609	55705	5.96
16	3.38	-15348	29031	-2507	52.28	95000	179699	55705	6.19
17	3.60	-14783	29083	-2878	52.28	95833	188530	55705	6.48
18	3.83	-14136	29121	-3179	52.28	96872	199565	55705	6.85
19	4.05	-13421	29144	-3417	52.28	97999	212811	55705	7.30
20	4.28	-12652	29151	-3600	52.28	99296	228791	55705	7.85
21	4.50	-11842	29144	-3734	52.28	100244	246711	55705	8.47
22	4.73	-11002	29122	-3826	52.28	101175	267813	55705	9.20
23	4.95	-10141	29085	-3883	52.28	101906	292275	55705	10.05
24	5.17	-9267	29033	-3909	52.28	102177	320100	55705	11.03
25	5.40	-8388	28966	-3910	52.28	101807	351571	55705	12.14
26	5.63	-7508	28884	-3890	52.28	100427	386345	55705	13.38
27	5.85	-6633	28787	-3855	52.28	97544	423357	55705	14.45
28	6.08	-5765	28676	-3806	52.28	93471	464893	55705	14.64
29	6.30	-4909	28914	-3546	52.28	87682	516427	55705	15.71
30	6.53	-4111	29196	-3255	52.28	80471	571460	55705	17.11
31	6.75	-3379	29479	-2943	52.28	71902	627289	55705	18.93
32	6.98	-2717	29762	-2619	52.28	62159	680956	55705	21.27
33	7.20	-2127	30045	-2290	52.28	51737	730678	55705	24.32
34	7.42	-1612	30327	-1960	52.28	40614	764043	55705	25.19
35	7.65	-1171	30610	-1634	52.28	29472	770378	55705	25.17
36	7.88	-803	30893	-1315	52.28	20169	775666	55705	25.11
37	8.10	-507	31176	-1004	52.28	12694	779916	55705	25.02
38	8.33	-281	31458	-703	52.28	7007	783150	55705	24.89
39	8.55	-123	31741	-413	52.28	3048	785401	55705	24.74
40	8.78	-30	32024	-134	52.28	741	786712	55705	24.57
41	9.00	0	32306	-134	52.28	0	787133	55705	24.36

COMBINAZIONE n° 15

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	4770.00	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	30.61	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	12368.59	[kg]
Risultante dei carichi applicati in dir. verticale	11911.18	[kg]
Momento ribaltante rispetto allo spigolo a valle	15791.78	[kgm]
Momento stabilizzante rispetto allo spigolo a valle	16002.66	[kgm]
Sforzo normale sul piano di posa della fondazione	11911.18	[kg]
Sforzo tangenziale sul piano di posa della fondazione	12368.59	[kg]
Eccentricità rispetto al baricentro della fondazione	0.93	[m]
Lunghezza fondazione reagente	0.05	[m]
Risultante in fondazione	17171.44	[kg]
Inclinazione della risultante (rispetto alla normale)	46.08	[°]
Momento rispetto al baricentro della fondazione	11110.82	[kgm]

COEFFICIENTI DI SICUREZZA

COMBINAZIONE n° 16

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	4012.63	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	25.24	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	1102.76	[kg]		
Inerzia verticale del muro	-551.38	[kg]		
Inerzia del terrapieno fondazione di monte	1078.93	[kg]		
Inerzia verticale del terrapieno fondazione di monte	-539.46	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	11633.71	[kg]		
Risultante dei carichi applicati in dir. verticale	9546.26	[kg]		
Momento ribaltante rispetto allo spigolo a valle	16026.93	[kgm]		
Momento stabilizzante rispetto allo spigolo a valle	14353.63	[kgm]		
Sforzo normale sul piano di posa della fondazione	9546.26	[kg]		
Sforzo tangenziale sul piano di posa della fondazione	11633.71	[kg]		
Eccentricità rispetto al baricentro della fondazione	1.13	[m]		
Lunghezza fondazione reagent	-0.53	[m]		
Risultante in fondazione	15049.07	[kg]		
Inclinazione della risultante (rispetto alla normale)	50.63	[°]		
Momento rispetto al baricentro della fondazione	10747.12	[kgm]		

COEFFICIENTI DI SICUREZZA

Stabilità globale muro + terreno

Combinazione n° 17

Le ascisse X sono considerate positive verso monte

Le ordinate Y sono considerate positive verso l'alto

Origine in testa al muro (spigolo contro terra)

W	peso della striscia espresso in [kg]
α	angolo fra la base della striscia e l'orizzontale espresso in [°] (positivo antiorario)
ϕ	angolo d'attrito del terreno lungo la base della striscia
c	coesione del terreno lungo la base della striscia espressa in [kg/cmq]
b	larghezza della striscia espressa in [m]
u	pressione neutra lungo la base della striscia espressa in [kg/cmq]
Ctn, Ctt	contributo tiranti espresso in [kg]

Metodo di Fellenius

Numero di cerchi analizzati 36

Numero di strisce 25

Cerchio critico

Coordinate del centro X[m]= -2.10 Y[m]= 2.10

Raggio del cerchio R[m]= 14.23

Ascissa a valle del cerchio Xi[m]= -15.58

Ascissa a monte del cerchio Xs[m]= 11.98

Larghezza della striscia dx[m]= 1.10

Coefficiente di sicurezza C= 2.36

Le strisce sono numerate da monte verso valle

Caratteristiche delle strisce

Striscia	W	$\alpha(^{\circ})$	Wsin α	b/cos α	ϕ	c	u	Ctn	Ctt
1	4014.14	73.55	3849.91	3.89	21.04	0.01	0.00	---	---
2	10243.84	61.18	8974.70	2.29	22.00	0.15	0.00	---	---
3	14058.44	52.89	11211.10	1.83	22.00	0.15	0.00	---	---
4	16923.62	46.01	12176.25	1.59	22.00	0.15	0.00	---	---
5	20269.21	39.92	13007.26	1.44	22.56	0.16	0.00	---	---
6	23321.36	34.34	13154.90	1.34	24.00	0.20	0.00	---	---
7	24903.54	29.11	12114.86	1.26	24.00	0.20	0.00	---	---
8	26185.79	24.14	10707.51	1.21	24.00	0.20	0.00	---	---
9	27205.69	19.35	9014.87	1.17	24.00	0.20	0.00	---	---
10	27899.03	14.70	7081.54	1.14	24.00	0.20	0.00	---	---
11	26721.77	10.15	4711.15	1.12	24.00	0.20	0.00	---	---
12	22827.70	5.67	2255.05	1.11	24.00	0.20	0.00	---	---
13	21482.20	1.22	456.93	1.10	24.00	0.20	0.00	---	---
14	21437.47	-3.22	-1205.74	1.10	24.00	0.20	0.00	---	---
15	21193.35	-7.69	-2834.84	1.11	24.00	0.20	0.00	---	---
16	20745.29	-12.20	-4383.09	1.13	24.00	0.20	0.00	---	---
17	20084.53	-16.79	-5800.58	1.15	24.00	0.20	0.00	---	---
18	19197.20	-21.49	-7032.81	1.18	24.00	0.20	0.00	---	---
19	18062.69	-26.35	-8018.02	1.23	24.00	0.20	0.00	---	---
20	16650.71	-31.43	-8682.99	1.29	24.00	0.20	0.00	---	---
21	14917.26	-36.81	-8936.92	1.38	23.68	0.19	0.00	---	---
22	12858.77	-42.59	-8702.71	1.50	22.00	0.15	0.00	---	---
23	10343.88	-48.99	-7805.77	1.68	22.00	0.15	0.00	---	---
24	7117.92	-56.39	-5927.86	1.99	22.00	0.15	0.00	---	---
25	2596.41	-65.83	-2368.74	2.69	21.54	0.08	0.00	---	---

 $\Sigma W_i = 451261.83$ [kg] $\Sigma W_i \sin \alpha_i = 37015.96$ [kg] $\Sigma W_i \cos \alpha_i \tan \phi_i = 172567.78$ [kg] $\Sigma c_i b_i / \cos \alpha_i = 58989.14$ [kg]

Stabilità globale muro + terreno

Combinazione n° 18

Le ascisse X sono considerate positive verso monte

Le ordinate Y sono considerate positive verso l'alto

Origine in testa al muro (spigolo contro terra)

W	peso della striscia espresso in [kg]
α	angolo fra la base della striscia e l'orizzontale espresso in [°] (positivo antiorario)
ϕ	angolo d'attrito del terreno lungo la base della striscia
c	coesione del terreno lungo la base della striscia espressa in [kg/cmq]
b	larghezza della striscia espressa in [m]
u	pressione neutra lungo la base della striscia espressa in [kg/cmq]
Ctn, Ctt	contributo tiranti espresso in [kg]

Metodo di Fellenius

Numero di cerchi analizzati 36

Numero di strisce 25

Cerchio critico

Coordinate del centro X[m]= -2.10 Y[m]= 2.10

Raggio del cerchio R[m]= 14.23

Ascissa a valle del cerchio Xi[m]= -15.58

Ascissa a monte del cerchio Xs[m]= 11.98

Larghezza della striscia dx[m]= 1.10

Coefficiente di sicurezza C= 2.13

Le strisce sono numerate da monte verso valle

Caratteristiche delle strisce

Striscia	W	$\alpha(^{\circ})$	Wsin α	b/cos α	ϕ	c	u	Ctn	Ctt
1	4014.14	73.55	3849.91	3.89	21.04	0.01	0.00	---	---
2	10243.84	61.18	8974.70	2.29	22.00	0.15	0.00	---	---
3	14058.44	52.89	11211.10	1.83	22.00	0.15	0.00	---	---
4	16923.62	46.01	12176.25	1.59	22.00	0.15	0.00	---	---
5	20269.21	39.92	13007.26	1.44	22.56	0.16	0.00	---	---
6	23321.36	34.34	13154.90	1.34	24.00	0.20	0.00	---	---
7	24903.54	29.11	12114.86	1.26	24.00	0.20	0.00	---	---
8	26185.79	24.14	10707.51	1.21	24.00	0.20	0.00	---	---
9	27205.69	19.35	9014.87	1.17	24.00	0.20	0.00	---	---
10	27899.03	14.70	7081.54	1.14	24.00	0.20	0.00	---	---
11	26721.77	10.15	4711.15	1.12	24.00	0.20	0.00	---	---
12	22827.70	5.67	2255.05	1.11	24.00	0.20	0.00	---	---
13	21482.20	1.22	456.93	1.10	24.00	0.20	0.00	---	---
14	21437.47	-3.22	-1205.74	1.10	24.00	0.20	0.00	---	---
15	21193.35	-7.69	-2834.84	1.11	24.00	0.20	0.00	---	---
16	20745.29	-12.20	-4383.09	1.13	24.00	0.20	0.00	---	---
17	20084.53	-16.79	-5800.58	1.15	24.00	0.20	0.00	---	---
18	19197.20	-21.49	-7032.81	1.18	24.00	0.20	0.00	---	---
19	18062.69	-26.35	-8018.02	1.23	24.00	0.20	0.00	---	---
20	16650.71	-31.43	-8682.99	1.29	24.00	0.20	0.00	---	---
21	14917.26	-36.81	-8936.92	1.38	23.68	0.19	0.00	---	---
22	12858.77	-42.59	-8702.71	1.50	22.00	0.15	0.00	---	---
23	10343.88	-48.99	-7805.77	1.68	22.00	0.15	0.00	---	---
24	7117.92	-56.39	-5927.86	1.99	22.00	0.15	0.00	---	---
25	2596.41	-65.83	-2368.74	2.69	21.54	0.08	0.00	---	---

$\Sigma W_i = 451261.83$ [kg]

$\Sigma W_i \sin \alpha_i = 37015.96$ [kg]

$\Sigma W_i \cos \alpha_i \tan \phi_i = 172567.78$ [kg]

$\Sigma c_i b_i / \cos \alpha_i = 58989.14$ [kg]

COMBINAZIONE n° 19

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	1189.06	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	44.49	[°]		

Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	343.73	[kg]		
Inerzia verticale del muro	171.86	[kg]		
Inerzia del terrapieno fondazione di monte	336.30	[kg]		
Inerzia verticale del terrapieno fondazione di monte	168.15	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	7392.36	[kg]		
Risultante dei carichi applicati in dir. verticale	10294.04	[kg]		
Sforzo normale sul piano di posa della fondazione	10294.04	[kg]		
Sforzo tangenziale sul piano di posa della fondazione	7392.36	[kg]		
Eccentricità rispetto al baricentro della fondazione	0.50	[m]		
Lunghezza fondazione reagente	1.36	[m]		
Risultante in fondazione	12673.37	[kg]		
Inclinazione della risultante (rispetto alla normale)	35.68	[°]		
Momento rispetto al baricentro della fondazione	5130.82	[kgm]		

Sollecitazioni paramento

Combinazione n° 19

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	3.50	60.52
3	0.25	191.59	15.03	133.67
4	0.38	290.45	36.18	219.43
5	0.50	391.36	68.52	318.17
6	0.63	494.32	114.37	446.05
7	0.75	599.32	178.71	618.45
8	0.88	706.36	266.01	815.89
9	1.00	815.45	378.83	1032.11
10	1.13	926.58	519.42	1265.90
11	1.25	1039.77	689.92	1516.31
12	1.38	1154.99	892.34	1782.65
13	1.50	1272.26	1128.64	2064.35
14	1.63	1391.58	1400.71	2360.98
15	1.75	1512.94	1710.37	2672.16
16	1.88	1636.35	2059.42	2997.62
17	2.00	1761.80	2449.62	3337.12
18	2.13	1889.30	2882.72	3690.45
19	2.25	2018.84	3360.41	4057.46
20	2.38	2150.43	3884.41	4438.02
21	2.50	2284.06	4456.30	4829.89

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 19

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-13.88	2.69	-1048.93	2004.89
2	0.07	-115.91	196.75	0.00	1958.15
3	0.13	-102.52	318.62	0.00	2605.56
4	0.20	0.00	493.99	0.00	4459.73
5	0.27	0.00	698.71	0.00	6318.25
6	0.33	0.00	915.10	0.00	8266.31
7	0.40	0.00	1213.02	0.00	10383.28
8	0.46	0.00	1780.97	-265.18	12579.36
9	0.52	0.00	2486.71	-1044.20	14999.69
10	0.57	0.00	3354.17	-2509.15	17629.40
11	0.63	0.00	4407.85	-2552.18	19552.78
12	1.06	-2054.30	0.00	-5006.46	0.00
13	1.10	-1857.55	0.00	-4771.60	0.00
14	1.17	-1557.43	0.00	-4335.77	0.00
15	1.23	-1284.25	0.00	-3927.84	0.00
16	1.30	-1037.07	0.00	-3528.34	0.00
17	1.37	-816.11	0.00	-3130.40	0.00
18	1.43	-621.48	0.00	-2733.61	0.00
19	1.50	-453.21	0.00	-2337.70	0.00
20	1.57	-311.30	0.00	-1942.55	0.00
21	1.63	-203.39	0.00	-1548.13	0.00
22	1.70	-118.36	0.00	-1154.46	0.00
23	1.77	-56.00	0.00	-761.67	0.00
24	1.83	-16.07	0.00	-419.69	0.00
25	1.90	0.00	2.22	-101.46	30.13

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-839.38	44.36	-928.81	334.13
2	0.13	-784.08	41.64	-2836.41	1902.82
3	0.27	-572.91	32.39	-4646.52	4024.32
4	0.40	-111.68	30.11	-4693.45	5497.31
5	0.50	-9.25	298.29	-4720.29	3779.40
6	0.63	-31.52	568.57	-3532.13	2195.26
7	0.77	-44.83	689.08	-2079.04	1048.88
8	0.90	-48.86	717.71	-698.08	698.08
9	1.03	-44.83	689.08	-1048.88	2079.04
10	1.17	-31.52	568.57	-2195.26	3532.13
11	1.30	-9.25	298.29	-3779.40	4720.29
12	1.40	-111.68	30.11	-5497.31	4693.45
13	1.53	-572.91	32.39	-4024.32	4646.52
14	1.67	-784.08	41.64	-1902.82	2836.41
15	1.80	-839.38	44.36	-928.81	928.81
16	1.93	-784.08	41.64	-2836.41	1902.82
17	2.07	-572.91	32.39	-4646.52	4024.32
18	2.20	-111.68	30.11	-4693.45	5497.31
19	2.30	-9.25	298.29	-4720.29	3779.40
20	2.43	-31.52	568.57	-3532.13	2195.26
21	2.57	-44.83	689.08	-2079.04	1048.88
22	2.70	-48.86	717.71	-698.08	698.08
23	2.83	-44.83	689.08	-1048.88	2079.04
24	2.97	-31.52	568.57	-2195.26	3532.13
25	3.10	-9.25	298.29	-3779.40	4720.29
26	3.20	-111.68	30.11	-5497.31	4693.45
27	3.33	-572.91	32.39	-4024.32	4646.52
28	3.47	-784.08	41.64	-1902.82	2836.41
29	3.60	-839.38	44.36	-928.81	928.81
30	3.73	-784.08	41.64	-2836.41	1902.82
31	3.87	-572.91	32.39	-4646.52	4024.32
32	4.00	-111.68	30.11	-4693.45	5497.31
33	4.10	-9.25	298.29	-4720.29	3779.40

34	4.23	-31.52	568.57	-3532.13	2195.26
35	4.37	-44.83	689.08	-2079.04	1048.88
36	4.50	-48.86	717.71	-698.08	698.08
37	4.63	-44.83	689.08	-1048.88	2079.04
38	4.77	-31.52	568.57	-2195.26	3532.13
39	4.90	-9.25	298.29	-3779.40	4720.29
40	5.00	-111.68	30.11	-5497.31	4693.45
41	5.13	-572.91	32.39	-4024.32	4646.52
42	5.27	-784.08	41.64	-1902.82	2836.41
43	5.40	-839.38	44.36	-928.81	928.81
44	5.53	-784.08	41.64	-2836.41	1902.82
45	5.67	-572.91	32.39	-4646.52	4024.32
46	5.80	-111.68	30.11	-4693.45	5497.31
47	5.90	-9.25	298.29	-4720.29	3779.40
48	6.03	-31.52	568.57	-3532.13	2195.26
49	6.17	-44.83	689.08	-2079.04	1048.88
50	6.30	-48.86	717.71	-698.08	698.08
51	6.43	-44.83	689.08	-1048.88	2079.04
52	6.57	-31.52	568.57	-2195.26	3532.13
53	6.70	-9.25	298.29	-3779.40	4720.29
54	6.80	-111.68	30.11	-5497.31	4693.45
55	6.93	-572.91	32.39	-4024.32	4646.52
56	7.07	-784.08	41.64	-1902.82	2836.41
57	7.20	-839.38	44.36	-928.81	928.81
58	7.33	-784.08	41.64	-2836.41	1902.82
59	7.47	-572.91	32.39	-4646.52	4024.32
60	7.60	-111.68	30.11	-4693.45	5497.31
61	7.70	-9.25	298.29	-4720.29	3779.40
62	7.83	-31.52	568.57	-3532.13	2195.26
63	7.97	-44.83	689.08	-2079.04	1048.88
64	8.10	-48.86	717.71	-698.08	698.08
65	8.23	-44.83	689.08	-1048.88	2079.04
66	8.37	-31.52	568.57	-2195.26	3532.13
67	8.50	-9.25	298.29	-3779.40	4720.29
68	8.60	-111.68	30.11	-5497.31	4693.45
69	8.73	-572.91	32.39	-4024.32	4646.52
70	8.87	-784.08	41.64	-1902.82	2836.41
71	9.00	-839.38	44.36	-928.81	928.81
72	9.13	-784.08	41.64	-2836.41	1902.82
73	9.27	-572.91	32.39	-4646.52	4024.32
74	9.40	-111.68	30.11	-4693.45	5497.31
75	9.50	-9.25	298.29	-4720.29	3779.40
76	9.63	-31.52	568.57	-3532.13	2195.26
77	9.77	-44.83	689.08	-2079.04	1048.88
78	9.90	-48.86	717.71	-698.08	698.08
79	10.03	-44.83	689.08	-1048.88	2079.04
80	10.17	-31.52	568.57	-2195.26	3532.13
81	10.30	-9.25	298.29	-3779.40	4720.29
82	10.40	-111.68	30.11	-5497.31	4693.45
83	10.53	-572.91	32.39	-4024.32	4646.52
84	10.67	-784.08	41.64	-1902.82	2836.41
85	10.80	-839.38	44.36	-928.81	928.81
86	10.93	-784.08	41.64	-2836.41	1902.82
87	11.07	-572.91	32.39	-4646.52	4024.32
88	11.20	-111.68	30.11	-4693.45	5497.31
89	11.30	-9.25	298.29	-4720.29	3779.40
90	11.43	-31.52	568.57	-3532.13	2195.26
91	11.57	-44.83	689.08	-2079.04	1048.88
92	11.70	-48.86	717.71	-698.08	698.08
93	11.83	-44.83	689.08	-1048.88	2079.04
94	11.97	-31.52	568.57	-2195.26	3532.13
95	12.10	-9.25	298.29	-3779.40	4720.29
96	12.20	-111.68	30.11	-5497.31	4693.45
97	12.33	-572.91	32.39	-4024.32	4646.52
98	12.47	-784.08	41.64	-1902.82	2836.41
99	12.60	-839.38	44.36	-928.81	928.81
100	12.73	-784.08	41.64	-2836.41	1902.82
101	12.87	-572.91	32.39	-4646.52	4024.32
102	13.00	-111.68	30.11	-4693.45	5497.31
103	13.10	-9.25	298.29	-4720.29	3779.40
104	13.23	-31.52	568.57	-3532.13	2195.26
105	13.37	-44.83	689.08	-2079.04	1048.88
106	13.50	-48.86	717.71	-698.08	698.08
107	13.63	-44.83	689.08	-1048.88	2079.04
108	13.77	-31.52	568.57	-2195.26	3532.13
109	13.90	-9.25	298.29	-3779.40	4720.29
110	14.00	-111.68	30.11	-5497.31	4693.45

111	14.13	-572.91	32.39	-4024.32	4646.52
112	14.27	-784.08	41.64	-1902.82	2836.41
113	14.40	-839.38	44.36	-928.81	928.81
114	14.53	-784.08	41.64	-2836.41	1902.82
115	14.67	-572.91	32.39	-4646.52	4024.32
116	14.80	-111.68	30.11	-4693.45	5497.31
117	14.90	-9.25	298.29	-4720.29	3779.40
118	15.03	-31.52	568.57	-3532.13	2195.26
119	15.17	-44.83	689.08	-2079.04	1048.88
120	15.30	-48.86	717.71	-698.08	698.08
121	15.43	-44.83	689.08	-1048.88	2079.04
122	15.57	-31.52	568.57	-2195.26	3532.13
123	15.70	-9.25	298.29	-3779.40	4720.29
124	15.80	-111.68	30.11	-5497.31	4693.45
125	15.93	-572.91	32.39	-4024.32	4646.52
126	16.07	-784.08	41.64	-1902.82	2836.41
127	16.20	-839.38	44.36	-928.81	928.81
128	16.33	-784.08	41.64	-2836.41	1902.82
129	16.47	-572.91	32.39	-4646.52	4024.32
130	16.60	-111.68	30.11	-4693.45	5497.31
131	16.70	-9.25	298.29	-4720.29	3779.40
132	16.83	-31.52	568.57	-3532.13	2195.26
133	16.97	-44.83	689.08	-2079.04	1048.88
134	17.10	-48.86	717.71	-698.08	698.08
135	17.23	-44.83	689.08	-1048.88	2079.04
136	17.37	-31.52	568.57	-2195.26	3532.13
137	17.50	-9.25	298.29	-3779.40	4720.29
138	17.60	-111.68	30.11	-5497.31	4693.45
139	17.73	-572.91	32.39	-4024.32	4646.52
140	17.87	-784.08	41.64	-1902.82	2836.41
141	18.00	-839.38	44.36	-928.81	928.81
142	18.13	-784.08	41.64	-2836.41	1902.82
143	18.27	-572.91	32.39	-4646.52	4024.32
144	18.40	-111.68	30.11	-4693.45	5497.31
145	18.50	-9.25	298.29	-4720.29	3779.40
146	18.63	-31.52	568.57	-3532.13	2195.26
147	18.77	-44.83	689.08	-2079.04	1048.88
148	18.90	-48.86	717.71	-698.08	698.08
149	19.03	-44.83	689.08	-1048.88	2079.04
150	19.17	-31.52	568.57	-2195.26	3532.13
151	19.30	-9.25	298.29	-3779.40	4720.29
152	19.40	-111.68	30.11	-5497.31	4693.45
153	19.53	-572.91	32.39	-4024.32	4646.52
154	19.67	-784.08	41.64	-1902.82	2836.41
155	19.80	-839.38	44.36	-928.81	928.81
156	19.93	-784.08	41.64	-2836.41	1902.82
157	20.07	-572.91	32.39	-4646.52	4024.32
158	20.20	-111.68	30.11	-4693.45	5497.31
159	20.30	-9.25	298.29	-4720.29	3779.40
160	20.43	-31.52	568.57	-3532.13	2195.26
161	20.57	-44.83	689.08	-2079.04	1048.88
162	20.70	-48.86	717.71	-698.08	698.08
163	20.83	-44.83	689.08	-1048.88	2079.04
164	20.97	-31.52	568.57	-2195.26	3532.13
165	21.10	-9.25	298.29	-3779.40	4720.29
166	21.20	-111.68	30.11	-5497.31	4693.45
167	21.33	-572.91	32.39	-4024.32	4646.52
168	21.47	-784.08	41.64	-1902.82	2836.41
169	21.60	-839.38	44.36	-928.81	928.81
170	21.73	-784.08	41.64	-2836.41	1902.82
171	21.87	-572.91	32.39	-4646.52	4024.32
172	22.00	-111.68	30.11	-4693.45	5497.31
173	22.10	-9.25	298.29	-4720.29	3779.40
174	22.23	-31.53	568.57	-3532.13	2195.26
175	22.37	-44.83	689.08	-2079.04	1048.88
176	22.50	-48.86	717.71	-698.08	698.07
177	22.63	-44.83	689.08	-1048.89	2079.04
178	22.77	-31.53	568.57	-2195.26	3532.13
179	22.90	-9.25	298.29	-3779.40	4720.29
180	23.00	-111.68	30.11	-5497.31	4693.45
181	23.13	-572.91	32.38	-4024.32	4646.51
182	23.27	-784.08	41.62	-1902.81	2836.41
183	23.40	-839.38	44.34	-928.81	928.80
184	23.53	-784.09	41.62	-2836.42	1902.79
185	23.67	-572.92	32.37	-4646.53	4024.30
186	23.80	-111.68	30.11	-4693.46	5497.31
187	23.90	-9.28	298.28	-4720.30	3779.39

188	24.03	-31.56	568.56	-3532.14	2195.25
189	24.17	-44.87	689.07	-2079.06	1048.87
190	24.30	-48.91	717.70	-698.10	698.04
191	24.43	-44.89	689.07	-1048.91	2079.00
192	24.57	-31.60	568.55	-2195.30	3532.07
193	24.70	-9.35	298.27	-3779.45	4720.22
194	24.80	-111.70	30.11	-5497.45	4693.38
195	24.93	-572.95	32.25	-4024.19	4646.43
196	25.07	-784.12	41.47	-1902.69	2836.30
197	25.20	-839.43	44.16	-929.00	928.66
198	25.33	-784.15	41.40	-2836.66	1902.12
199	25.47	-573.00	32.10	-4646.84	4023.69
200	25.60	-111.77	30.11	-4693.82	5497.35
201	25.70	-9.67	298.15	-4720.67	3779.12
202	25.83	-32.02	568.39	-3532.60	2194.90
203	25.97	-45.43	688.85	-2079.65	1048.45
204	26.10	-49.59	717.44	-698.87	697.04
205	26.23	-45.69	688.72	-1049.78	2077.74
206	26.37	-32.57	568.10	-2196.33	3530.43
207	26.50	-10.55	297.67	-3780.91	4718.21
208	26.60	-112.30	30.10	-5501.51	4691.38
209	26.73	-573.89	30.56	-4020.26	4643.78
210	26.87	-785.34	39.42	-1898.98	2832.89
211	27.00	-840.99	41.74	-934.64	924.27
212	27.13	-786.06	38.44	-2843.90	1881.61
213	27.27	-575.49	28.46	-4656.32	4005.05
214	27.40	-114.48	30.08	-4704.87	5498.51
215	27.50	-15.06	293.97	-4731.75	3770.88
216	27.63	-38.42	563.18	-3546.35	2184.27
217	27.77	-53.16	682.18	-2097.47	1035.49
218	27.90	-58.90	709.26	-721.93	667.17
219	28.03	-56.68	678.16	-1077.03	2040.27
220	28.17	-45.68	554.24	-2229.43	3482.23
221	28.30	-26.11	279.05	-3829.02	4659.57
222	28.40	-130.83	30.01	-5636.87	4633.03
223	28.53	-604.10	12.04	-3924.04	4567.02
224	28.67	-824.99	20.26	-1858.24	2734.44
225	28.80	-893.66	23.62	-1101.76	796.77
226	28.93	-853.17	24.08	-3069.76	1225.87
227	29.07	-666.37	22.95	-4968.55	3386.73
228	29.20	-236.14	26.02	-4942.68	5496.38
229	29.33	0.00	210.13	-4973.70	3128.01
230	29.47	0.00	382.92	-3851.64	1425.79
231	29.60	0.00	416.26	-2771.80	376.76
232	29.73	-0.13	369.37	-2036.19	7.07
233	29.87	-20.31	292.36	-1929.75	103.04
234	30.00	-31.39	8.76	-1962.85	98.16

Armature e tensioni nei materiali del muro

Combinazione n° 19

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta sul lembo di monte in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta sul lembo di valle in [kg/cmq]

Nr.	Y	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fs}	σ _{fi}
1	0.00	100, 30	10.05	8.04	0.00	0.00	0.00	0.00
2	0.13	100, 31	10.05	8.04	0.05	0.03	-0.19	-0.66
3	0.25	100, 31	10.05	8.04	0.14	0.06	0.24	-1.86
4	0.38	100, 32	10.05	8.04	0.31	0.09	2.79	-3.95
5	0.50	100, 33	10.05	8.04	0.59	0.13	9.09	-6.98
6	0.63	100, 33	14.07	8.04	0.88	0.17	15.02	-10.39
7	0.75	100, 34	14.07	8.04	1.32	0.24	27.11	-15.21
8	0.88	100, 35	14.07	8.04	1.88	0.30	44.19	-21.33
9	1.00	100, 35	14.07	8.04	2.57	0.38	66.56	-28.79
10	1.13	100, 36	14.07	8.04	3.39	0.45	94.42	-37.62
11	1.25	100, 37	14.07	8.04	4.34	0.53	127.92	-47.84
12	1.38	100, 37	14.07	8.04	5.42	0.61	167.17	-59.46

13	1.50	100, 38	14.07	8.04	6.62	0.70	212.26	-72.47
14	1.63	100, 39	14.07	8.04	7.95	0.78	263.26	-86.89
15	1.75	100, 39	14.07	8.04	9.40	0.87	320.22	-102.70
16	1.88	100, 40	14.07	8.04	10.97	0.96	383.19	-119.89
17	2.00	100, 40	28.15	16.08	9.30	1.05	232.45	-109.76
18	2.13	100, 41	14.07	8.04	14.46	1.14	527.27	-158.36
19	2.25	100, 42	14.07	8.04	16.38	1.23	608.41	-179.62
20	2.38	100, 42	14.07	8.04	18.41	1.32	695.65	-202.20
21	2.50	100, 43	14.07	8.04	20.54	1.42	788.97	-226.08

Armature e tensioni nei materiali della fondazione

Combinazione n° 19

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta in corrispondenza del lembo inferiore in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta in corrispondenza del lembo superiore in [kg/cmq]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.09	0.21	0.97	5.02
2	0.07	100, 40	8.04	8.04	1.25	0.27	71.19	41.94
3	0.13	100, 40	8.04	8.04	2.02	0.61	115.29	37.10
4	0.20	100, 40	8.04	8.04	3.13	0.93	178.75	-28.69
5	0.27	100, 40	8.04	8.04	4.43	1.24	252.82	-40.59
6	0.33	100, 40	8.04	8.04	5.80	1.55	331.12	-53.16
7	0.40	100, 40	8.04	8.04	7.69	1.86	438.92	-70.46
8	0.46	100, 40	8.04	8.04	11.30	2.13	644.43	-103.45
9	0.52	100, 40	8.04	8.04	15.77	2.40	899.80	-144.45
10	0.57	100, 40	8.04	8.04	21.27	2.66	1213.69	-194.84
11	0.63	100, 40	8.04	10.05	25.61	2.92	1284.47	-248.92

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.01	-0.02	0.80	-0.13
2	0.07	100, 40	8.04	8.04	0.10	-0.11	-0.93	5.81
3	0.13	100, 40	8.04	8.04	0.36	-0.22	-3.25	20.26
4	0.20	100, 40	8.04	8.04	0.75	-0.34	-6.88	42.83
5	0.27	100, 40	8.04	8.04	1.29	-0.45	-11.81	73.60
6	0.33	100, 40	8.04	8.04	1.97	-0.56	-18.08	112.64
7	0.40	100, 40	8.04	8.04	2.87	-0.67	-26.33	163.99
8	0.47	100, 40	8.04	8.04	3.94	-0.78	-36.10	224.88
9	0.53	100, 40	8.04	8.04	5.18	-0.89	-47.41	295.30
10	0.60	100, 40	8.04	8.04	6.58	-1.01	-60.24	375.26
11	0.67	100, 40	8.04	8.04	8.15	-1.12	-74.60	464.70
12	0.73	100, 40	8.04	8.04	9.88	-1.23	-90.47	563.54
13	0.80	100, 40	8.04	8.04	11.78	-1.34	-107.90	672.14
14	0.84	100, 40	8.04	8.04	13.03	-1.42	-119.33	743.34

Armature e tensioni piastre

Combinazione n° 19

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	-2.84	44.52	0.47	0.01
2	0.13	2.83	2.83	-2.66	41.79	0.44	0.01
3	0.27	2.83	2.83	-2.07	32.51	0.34	0.03

4	0.40	2.83	2.83	1.30	14.22	0.15	-0.04
5	0.50	2.83	2.83	9.28	-0.59	0.10	-0.05
6	0.63	2.83	2.83	31.64	-2.02	0.33	-0.04
7	0.77	2.83	2.83	44.99	-2.87	0.47	-0.02
8	0.90	2.83	2.83	49.04	-3.13	0.52	0.01
9	1.03	2.83	2.83	44.99	-2.87	0.47	0.02
10	1.17	2.83	2.83	31.64	-2.02	0.33	0.04
11	1.30	2.83	2.83	9.28	-0.59	0.10	0.05
12	1.40	2.83	2.83	1.30	14.22	0.15	0.04
13	1.53	2.83	2.83	-2.07	32.51	0.34	-0.03
14	1.67	2.83	2.83	-2.66	41.79	0.44	-0.01
15	1.80	2.83	2.83	-2.84	44.52	0.47	0.01
16	1.93	2.83	2.83	-2.66	41.79	0.44	0.01
17	2.07	2.83	2.83	-2.07	32.51	0.34	0.03
18	2.20	2.83	2.83	1.30	14.22	0.15	-0.04
19	2.30	2.83	2.83	9.28	-0.59	0.10	-0.05
20	2.43	2.83	2.83	31.64	-2.02	0.33	-0.04
21	2.57	2.83	2.83	44.99	-2.87	0.47	-0.02
22	2.70	2.83	2.83	49.04	-3.13	0.52	0.01
23	2.83	2.83	2.83	44.99	-2.87	0.47	0.02
24	2.97	2.83	2.83	31.64	-2.02	0.33	0.04
25	3.10	2.83	2.83	9.28	-0.59	0.10	0.05
26	3.20	2.83	2.83	1.30	14.22	0.15	0.04
27	3.33	2.83	2.83	-2.07	32.51	0.34	-0.03
28	3.47	2.83	2.83	-2.66	41.79	0.44	-0.01
29	3.60	2.83	2.83	-2.84	44.52	0.47	0.01
30	3.73	2.83	2.83	-2.66	41.79	0.44	0.01
31	3.87	2.83	2.83	-2.07	32.51	0.34	0.03
32	4.00	2.83	2.83	1.30	14.22	0.15	-0.04
33	4.10	2.83	2.83	9.28	-0.59	0.10	-0.05
34	4.23	2.83	2.83	31.64	-2.02	0.33	-0.04
35	4.37	2.83	2.83	44.99	-2.87	0.47	-0.02
36	4.50	2.83	2.83	49.04	-3.13	0.52	0.01
37	4.63	2.83	2.83	44.99	-2.87	0.47	0.02
38	4.77	2.83	2.83	31.64	-2.02	0.33	0.04
39	4.90	2.83	2.83	9.28	-0.59	0.10	0.05
40	5.00	2.83	2.83	1.30	14.22	0.15	0.04
41	5.13	2.83	2.83	-2.07	32.51	0.34	-0.03
42	5.27	2.83	2.83	-2.66	41.79	0.44	-0.01
43	5.40	2.83	2.83	-2.84	44.52	0.47	0.01
44	5.53	2.83	2.83	-2.66	41.79	0.44	0.01
45	5.67	2.83	2.83	-2.07	32.51	0.34	0.03
46	5.80	2.83	2.83	1.30	14.22	0.15	-0.04
47	5.90	2.83	2.83	9.28	-0.59	0.10	-0.05
48	6.03	2.83	2.83	31.64	-2.02	0.33	-0.04
49	6.17	2.83	2.83	44.99	-2.87	0.47	-0.02
50	6.30	2.83	2.83	49.04	-3.13	0.52	0.01
51	6.43	2.83	2.83	44.99	-2.87	0.47	0.02
52	6.57	2.83	2.83	31.64	-2.02	0.33	0.04
53	6.70	2.83	2.83	9.28	-0.59	0.10	0.05
54	6.80	2.83	2.83	1.30	14.22	0.15	0.04
55	6.93	2.83	2.83	-2.07	32.51	0.34	-0.03
56	7.07	2.83	2.83	-2.66	41.79	0.44	-0.01
57	7.20	2.83	2.83	-2.84	44.52	0.47	0.01
58	7.33	2.83	2.83	-2.66	41.79	0.44	0.01
59	7.47	2.83	2.83	-2.07	32.51	0.34	0.03
60	7.60	2.83	2.83	1.30	14.22	0.15	-0.04
61	7.70	2.83	2.83	9.28	-0.59	0.10	-0.05
62	7.83	2.83	2.83	31.64	-2.02	0.33	-0.04
63	7.97	2.83	2.83	44.99	-2.87	0.47	-0.02
64	8.10	2.83	2.83	49.04	-3.13	0.52	-0.01
65	8.23	2.83	2.83	44.99	-2.87	0.47	0.02
66	8.37	2.83	2.83	31.64	-2.02	0.33	0.04
67	8.50	2.83	2.83	9.28	-0.59	0.10	0.05
68	8.60	2.83	2.83	1.30	14.22	0.15	0.04
69	8.73	2.83	2.83	-2.07	32.51	0.34	-0.03
70	8.87	2.83	2.83	-2.66	41.79	0.44	-0.01
71	9.00	2.83	2.83	-2.84	44.52	0.47	-0.01
72	9.13	2.83	2.83	-2.66	41.79	0.44	0.01
73	9.27	2.83	2.83	-2.07	32.51	0.34	0.03
74	9.40	2.83	2.83	1.30	14.22	0.15	-0.04
75	9.50	2.83	2.83	9.28	-0.59	0.10	-0.05
76	9.63	2.83	2.83	31.64	-2.02	0.33	-0.04
77	9.77	2.83	2.83	44.99	-2.87	0.47	-0.02
78	9.90	2.83	2.83	49.04	-3.13	0.52	-0.01
79	10.03	2.83	2.83	44.99	-2.87	0.47	0.02
80	10.17	2.83	2.83	31.64	-2.02	0.33	0.04

81	10.30	2.83	2.83	9.28	-0.59	0.10	0.05
82	10.40	2.83	2.83	1.30	14.22	0.15	0.04
83	10.53	2.83	2.83	-2.07	32.51	0.34	-0.03
84	10.67	2.83	2.83	-2.66	41.79	0.44	-0.01
85	10.80	2.83	2.83	-2.84	44.52	0.47	-0.01
86	10.93	2.83	2.83	-2.66	41.79	0.44	0.01
87	11.07	2.83	2.83	-2.07	32.51	0.34	0.03
88	11.20	2.83	2.83	1.30	14.22	0.15	-0.04
89	11.30	2.83	2.83	9.28	-0.59	0.10	-0.05
90	11.43	2.83	2.83	31.64	-2.02	0.33	-0.04
91	11.57	2.83	2.83	44.99	-2.87	0.47	-0.02
92	11.70	2.83	2.83	49.04	-3.13	0.52	-0.01
93	11.83	2.83	2.83	44.99	-2.87	0.47	0.02
94	11.97	2.83	2.83	31.64	-2.02	0.33	0.04
95	12.10	2.83	2.83	9.28	-0.59	0.10	0.05
96	12.20	2.83	2.83	1.30	14.22	0.15	0.04
97	12.33	2.83	2.83	-2.07	32.51	0.34	-0.03
98	12.47	2.83	2.83	-2.66	41.79	0.44	-0.01
99	12.60	2.83	2.83	-2.84	44.52	0.47	-0.01
100	12.73	2.83	2.83	-2.66	41.79	0.44	0.01
101	12.87	2.83	2.83	-2.07	32.51	0.34	0.03
102	13.00	2.83	2.83	1.30	14.22	0.15	-0.04
103	13.10	2.83	2.83	9.28	-0.59	0.10	-0.05
104	13.23	2.83	2.83	31.64	-2.02	0.33	-0.04
105	13.37	2.83	2.83	44.99	-2.87	0.47	-0.02
106	13.50	2.83	2.83	49.04	-3.13	0.52	-0.01
107	13.63	2.83	2.83	44.99	-2.87	0.47	0.02
108	13.77	2.83	2.83	31.64	-2.02	0.33	0.04
109	13.90	2.83	2.83	9.28	-0.59	0.10	0.05
110	14.00	2.83	2.83	1.30	14.22	0.15	0.04
111	14.13	2.83	2.83	-2.07	32.51	0.34	-0.03
112	14.27	2.83	2.83	-2.66	41.79	0.44	-0.01
113	14.40	2.83	2.83	-2.84	44.52	0.47	-0.01
114	14.53	2.83	2.83	-2.66	41.79	0.44	0.01
115	14.67	2.83	2.83	-2.07	32.51	0.34	0.03
116	14.80	2.83	2.83	1.30	14.22	0.15	-0.04
117	14.90	2.83	2.83	9.28	-0.59	0.10	-0.05
118	15.03	2.83	2.83	31.64	-2.02	0.33	-0.04
119	15.17	2.83	2.83	44.99	-2.87	0.47	-0.02
120	15.30	2.83	2.83	49.04	-3.13	0.52	-0.01
121	15.43	2.83	2.83	44.99	-2.87	0.47	0.02
122	15.57	2.83	2.83	31.64	-2.02	0.33	0.04
123	15.70	2.83	2.83	9.28	-0.59	0.10	0.05
124	15.80	2.83	2.83	1.30	14.22	0.15	0.04
125	15.93	2.83	2.83	-2.07	32.51	0.34	-0.03
126	16.07	2.83	2.83	-2.66	41.79	0.44	-0.01
127	16.20	2.83	2.83	-2.84	44.52	0.47	-0.01
128	16.33	2.83	2.83	-2.66	41.79	0.44	0.01
129	16.47	2.83	2.83	-2.07	32.51	0.34	0.03
130	16.60	2.83	2.83	1.30	14.22	0.15	-0.04
131	16.70	2.83	2.83	9.28	-0.59	0.10	-0.05
132	16.83	2.83	2.83	31.64	-2.02	0.33	-0.04
133	16.97	2.83	2.83	44.99	-2.87	0.47	-0.02
134	17.10	2.83	2.83	49.04	-3.13	0.52	-0.01
135	17.23	2.83	2.83	44.99	-2.87	0.47	0.02
136	17.37	2.83	2.83	31.64	-2.02	0.33	0.04
137	17.50	2.83	2.83	9.28	-0.59	0.10	0.05
138	17.60	2.83	2.83	1.30	14.22	0.15	0.04
139	17.73	2.83	2.83	-2.07	32.51	0.34	-0.03
140	17.87	2.83	2.83	-2.66	41.79	0.44	-0.01
141	18.00	2.83	2.83	-2.84	44.52	0.47	-0.01
142	18.13	2.83	2.83	-2.66	41.79	0.44	0.01
143	18.27	2.83	2.83	-2.07	32.51	0.34	0.03
144	18.40	2.83	2.83	1.30	14.22	0.15	-0.04
145	18.50	2.83	2.83	9.28	-0.59	0.10	-0.05
146	18.63	2.83	2.83	31.64	-2.02	0.33	-0.04
147	18.77	2.83	2.83	44.99	-2.87	0.47	-0.02
148	18.90	2.83	2.83	49.04	-3.13	0.52	-0.01
149	19.03	2.83	2.83	44.99	-2.87	0.47	0.02
150	19.17	2.83	2.83	31.64	-2.02	0.33	0.04
151	19.30	2.83	2.83	9.28	-0.59	0.10	0.05
152	19.40	2.83	2.83	1.30	14.22	0.15	0.04
153	19.53	2.83	2.83	-2.07	32.51	0.34	-0.03
154	19.67	2.83	2.83	-2.66	41.79	0.44	-0.01
155	19.80	2.83	2.83	-2.84	44.52	0.47	-0.01
156	19.93	2.83	2.83	-2.66	41.79	0.44	0.01
157	20.07	2.83	2.83	-2.07	32.51	0.34	0.03

158	20.20	2.83	2.83	1.30	14.22	0.15	-0.04
159	20.30	2.83	2.83	9.28	-0.59	0.10	-0.05
160	20.43	2.83	2.83	31.64	-2.02	0.33	-0.04
161	20.57	2.83	2.83	44.99	-2.87	0.47	-0.02
162	20.70	2.83	2.83	49.04	-3.13	0.52	-0.01
163	20.83	2.83	2.83	44.99	-2.87	0.47	0.02
164	20.97	2.83	2.83	31.64	-2.02	0.33	0.04
165	21.10	2.83	2.83	9.28	-0.59	0.10	0.05
166	21.20	2.83	2.83	1.30	14.22	0.15	0.04
167	21.33	2.83	2.83	-2.07	32.51	0.34	-0.03
168	21.47	2.83	2.83	-2.66	41.79	0.44	-0.01
169	21.60	2.83	2.83	-2.84	44.52	0.47	-0.01
170	21.73	2.83	2.83	-2.66	41.79	0.44	0.01
171	21.87	2.83	2.83	-2.07	32.51	0.34	0.03
172	22.00	2.83	2.83	1.30	14.22	0.15	-0.04
173	22.10	2.83	2.83	9.28	-0.59	0.10	-0.05
174	22.23	2.83	2.83	31.64	-2.02	0.33	-0.04
175	22.37	2.83	2.83	45.00	-2.87	0.47	-0.02
176	22.50	2.83	2.83	49.04	-3.13	0.52	-0.01
177	22.63	2.83	2.83	45.00	-2.87	0.47	0.02
178	22.77	2.83	2.83	31.65	-2.02	0.33	0.04
179	22.90	2.83	2.83	9.29	-0.59	0.10	0.05
180	23.00	2.83	2.83	1.30	14.21	0.15	0.04
181	23.13	2.83	2.83	-2.07	32.50	0.34	-0.03
182	23.27	2.83	2.83	-2.66	41.78	0.44	-0.01
183	23.40	2.83	2.83	-2.84	44.51	0.47	-0.01
184	23.53	2.83	2.83	-2.66	41.77	0.44	0.01
185	23.67	2.83	2.83	-2.07	32.49	0.34	0.03
186	23.80	2.83	2.83	1.30	14.20	0.15	-0.04
187	23.90	2.83	2.83	9.31	-0.59	0.10	-0.05
188	24.03	2.83	2.83	31.68	-2.02	0.33	-0.04
189	24.17	2.83	2.83	45.04	-2.87	0.47	-0.02
190	24.30	2.83	2.83	49.09	-3.13	0.52	-0.01
191	24.43	2.83	2.83	45.06	-2.87	0.47	0.02
192	24.57	2.83	2.83	31.72	-2.02	0.33	0.04
193	24.70	2.83	2.83	9.38	-0.60	0.10	0.05
194	24.80	2.83	2.83	1.30	14.12	0.15	0.04
195	24.93	2.83	2.83	-2.06	32.37	0.34	-0.03
196	25.07	2.83	2.83	-2.65	41.62	0.44	-0.01
197	25.20	2.83	2.83	-2.83	44.33	0.47	-0.01
198	25.33	2.83	2.83	-2.65	41.55	0.44	0.01
199	25.47	2.83	2.83	-2.05	32.22	0.34	0.03
200	25.60	2.83	2.83	1.31	13.91	0.15	-0.04
201	25.70	2.83	2.83	9.71	-0.62	0.10	-0.05
202	25.83	2.83	2.83	32.14	-2.05	0.34	-0.04
203	25.97	2.83	2.83	45.60	-2.91	0.48	-0.02
204	26.10	2.83	2.83	49.77	-3.17	0.52	-0.01
205	26.23	2.83	2.83	45.86	-2.92	0.48	0.02
206	26.37	2.83	2.83	32.69	-2.08	0.34	0.04
207	26.50	2.83	2.83	10.59	-0.68	0.11	0.05
208	26.60	2.83	2.83	1.31	12.92	0.14	0.04
209	26.73	2.83	2.83	-1.96	30.67	0.32	-0.03
210	26.87	2.83	2.83	-2.52	39.57	0.42	-0.01
211	27.00	2.83	2.83	-2.67	41.89	0.44	-0.01
212	27.13	2.83	2.83	-2.46	38.58	0.41	-0.01
213	27.27	2.83	2.83	-1.82	28.56	0.30	-0.03
214	27.40	2.83	2.83	1.31	10.08	0.11	-0.04
215	27.50	2.83	2.83	15.12	-0.96	0.16	-0.05
216	27.63	2.83	2.83	38.57	-2.46	0.41	-0.04
217	27.77	2.83	2.83	53.35	-3.40	0.56	-0.02
218	27.90	2.83	2.83	59.12	-3.77	0.62	-0.02
219	28.03	2.83	2.83	56.89	-3.63	0.60	-0.02
220	28.17	2.83	2.83	45.85	-2.92	0.48	-0.03
221	28.30	2.83	2.83	26.21	-1.67	0.28	-0.04
222	28.40	2.83	2.83	7.41	3.99	0.08	-0.05
223	28.53	2.83	2.83	-0.77	12.08	0.13	-0.05
224	28.67	2.83	2.83	-1.30	20.33	0.21	-0.03
225	28.80	2.83	2.83	-1.51	23.71	0.25	-0.02
226	28.93	2.83	2.83	-1.54	24.17	0.25	-0.02
227	29.07	2.83	2.83	-1.47	23.04	0.24	-0.01
228	29.20	2.83	2.83	-1.35	21.20	0.22	-0.01
229	29.33	2.83	2.83	-1.23	19.29	0.20	-0.01
230	29.47	2.83	2.83	-1.12	17.52	0.18	-0.01
231	29.60	2.83	2.83	-1.02	16.01	0.17	-0.01
232	29.73	2.83	2.83	-0.94	14.71	0.15	0.00
233	29.87	2.83	2.83	1.45	13.82	0.15	0.01
234	30.00	2.83	2.83	-0.56	8.79	0.09	0.01

Piastra fondazione valle

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	842.51	-53.72	8.85	-0.22
2	0.13	2.83	2.83	787.01	-50.18	8.27	-0.37
3	0.27	2.83	2.83	575.05	-36.67	6.04	-0.76
4	0.40	2.83	2.83	112.10	30.22	1.18	0.95
5	0.50	2.83	2.83	-19.09	299.40	3.15	-0.87
6	0.63	2.83	2.83	-36.39	570.69	6.00	-0.63
7	0.77	2.83	2.83	-44.10	691.65	7.27	-0.28
8	0.90	2.83	2.83	-45.94	720.39	7.57	0.12
9	1.03	2.83	2.83	-44.10	691.65	7.27	0.28
10	1.17	2.83	2.83	-36.39	570.69	6.00	0.63
11	1.30	2.83	2.83	-19.09	299.40	3.15	0.87
12	1.40	2.83	2.83	112.10	30.22	1.18	-0.95
13	1.53	2.83	2.83	575.05	-36.67	6.04	0.76
14	1.67	2.83	2.83	787.01	-50.18	8.27	0.37
15	1.80	2.83	2.83	842.51	-53.72	8.85	0.17
16	1.93	2.83	2.83	787.01	-50.18	8.27	-0.37
17	2.07	2.83	2.83	575.05	-36.67	6.04	-0.76
18	2.20	2.83	2.83	112.10	30.22	1.18	0.95
19	2.30	2.83	2.83	-19.09	299.40	3.15	-0.87
20	2.43	2.83	2.83	-36.39	570.69	6.00	-0.63
21	2.57	2.83	2.83	-44.10	691.65	7.27	-0.28
22	2.70	2.83	2.83	-45.94	720.39	7.57	0.12
23	2.83	2.83	2.83	-44.10	691.65	7.27	0.28
24	2.97	2.83	2.83	-36.39	570.69	6.00	0.63
25	3.10	2.83	2.83	-19.09	299.40	3.15	0.87
26	3.20	2.83	2.83	112.10	30.22	1.18	-0.95
27	3.33	2.83	2.83	575.05	-36.67	6.04	0.76
28	3.47	2.83	2.83	787.01	-50.18	8.27	0.37
29	3.60	2.83	2.83	842.51	-53.72	8.85	0.17
30	3.73	2.83	2.83	787.01	-50.18	8.27	-0.37
31	3.87	2.83	2.83	575.05	-36.67	6.04	-0.76
32	4.00	2.83	2.83	112.10	30.22	1.18	0.95
33	4.10	2.83	2.83	-19.09	299.40	3.15	-0.87
34	4.23	2.83	2.83	-36.39	570.69	6.00	-0.63
35	4.37	2.83	2.83	-44.10	691.65	7.27	-0.28
36	4.50	2.83	2.83	-45.94	720.39	7.57	-0.12
37	4.63	2.83	2.83	-44.10	691.65	7.27	0.28
38	4.77	2.83	2.83	-36.39	570.69	6.00	0.63
39	4.90	2.83	2.83	-19.09	299.40	3.15	0.87
40	5.00	2.83	2.83	112.10	30.22	1.18	-0.95
41	5.13	2.83	2.83	575.05	-36.67	6.04	0.76
42	5.27	2.83	2.83	787.01	-50.18	8.27	0.37
43	5.40	2.83	2.83	842.51	-53.72	8.85	-0.17
44	5.53	2.83	2.83	787.01	-50.18	8.27	-0.37
45	5.67	2.83	2.83	575.05	-36.67	6.04	-0.76
46	5.80	2.83	2.83	112.10	30.22	1.18	0.95
47	5.90	2.83	2.83	-19.09	299.40	3.15	-0.87
48	6.03	2.83	2.83	-36.39	570.69	6.00	-0.63
49	6.17	2.83	2.83	-44.10	691.65	7.27	-0.28
50	6.30	2.83	2.83	-45.94	720.39	7.57	0.12
51	6.43	2.83	2.83	-44.10	691.65	7.27	0.28
52	6.57	2.83	2.83	-36.39	570.69	6.00	0.63
53	6.70	2.83	2.83	-19.09	299.40	3.15	0.87
54	6.80	2.83	2.83	112.10	30.22	1.18	-0.95
55	6.93	2.83	2.83	575.05	-36.67	6.04	0.76
56	7.07	2.83	2.83	787.01	-50.18	8.27	0.37
57	7.20	2.83	2.83	842.51	-53.72	8.85	0.17
58	7.33	2.83	2.83	787.01	-50.18	8.27	-0.37
59	7.47	2.83	2.83	575.05	-36.67	6.04	-0.76
60	7.60	2.83	2.83	112.10	30.22	1.18	0.95
61	7.70	2.83	2.83	-19.09	299.40	3.15	-0.87
62	7.83	2.83	2.83	-36.39	570.69	6.00	-0.63
63	7.97	2.83	2.83	-44.10	691.65	7.27	-0.28
64	8.10	2.83	2.83	-45.94	720.39	7.57	0.12
65	8.23	2.83	2.83	-44.10	691.65	7.27	0.28
66	8.37	2.83	2.83	-36.39	570.69	6.00	0.63
67	8.50	2.83	2.83	-19.09	299.40	3.15	0.87
68	8.60	2.83	2.83	112.10	30.22	1.18	-0.95
69	8.73	2.83	2.83	575.05	-36.67	6.04	0.76
70	8.87	2.83	2.83	787.01	-50.18	8.27	0.37
71	9.00	2.83	2.83	842.51	-53.72	8.85	0.17
72	9.13	2.83	2.83	787.01	-50.18	8.27	-0.37
73	9.27	2.83	2.83	575.05	-36.67	6.04	-0.76

74	9.40	2.83	2.83	112.10	30.22	1.18	0.95
75	9.50	2.83	2.83	-19.09	299.40	3.15	-0.87
76	9.63	2.83	2.83	-36.39	570.69	6.00	-0.63
77	9.77	2.83	2.83	-44.10	691.65	7.27	-0.28
78	9.90	2.83	2.83	-45.94	720.39	7.57	-0.12
79	10.03	2.83	2.83	-44.10	691.65	7.27	0.28
80	10.17	2.83	2.83	-36.39	570.69	6.00	0.63
81	10.30	2.83	2.83	-19.09	299.40	3.15	0.87
82	10.40	2.83	2.83	112.10	30.22	1.18	-0.95
83	10.53	2.83	2.83	575.05	-36.67	6.04	0.76
84	10.67	2.83	2.83	787.01	-50.18	8.27	0.37
85	10.80	2.83	2.83	842.51	-53.72	8.85	-0.17
86	10.93	2.83	2.83	787.01	-50.18	8.27	-0.37
87	11.07	2.83	2.83	575.05	-36.67	6.04	-0.76
88	11.20	2.83	2.83	112.10	30.22	1.18	0.95
89	11.30	2.83	2.83	-19.09	299.40	3.15	-0.87
90	11.43	2.83	2.83	-36.39	570.69	6.00	-0.63
91	11.57	2.83	2.83	-44.10	691.65	7.27	-0.28
92	11.70	2.83	2.83	-45.94	720.39	7.57	0.12
93	11.83	2.83	2.83	-44.10	691.65	7.27	0.28
94	11.97	2.83	2.83	-36.39	570.69	6.00	0.63
95	12.10	2.83	2.83	-19.09	299.40	3.15	0.87
96	12.20	2.83	2.83	112.10	30.22	1.18	-0.95
97	12.33	2.83	2.83	575.05	-36.67	6.04	0.76
98	12.47	2.83	2.83	787.01	-50.18	8.27	0.37
99	12.60	2.83	2.83	842.51	-53.72	8.85	-0.17
100	12.73	2.83	2.83	787.01	-50.18	8.27	-0.37
101	12.87	2.83	2.83	575.05	-36.67	6.04	-0.76
102	13.00	2.83	2.83	112.10	30.22	1.18	0.95
103	13.10	2.83	2.83	-19.09	299.40	3.15	-0.87
104	13.23	2.83	2.83	-36.39	570.69	6.00	-0.63
105	13.37	2.83	2.83	-44.10	691.65	7.27	-0.28
106	13.50	2.83	2.83	-45.94	720.39	7.57	-0.12
107	13.63	2.83	2.83	-44.10	691.65	7.27	0.28
108	13.77	2.83	2.83	-36.39	570.69	6.00	0.63
109	13.90	2.83	2.83	-19.09	299.40	3.15	0.87
110	14.00	2.83	2.83	112.10	30.22	1.18	-0.95
111	14.13	2.83	2.83	575.05	-36.67	6.04	0.76
112	14.27	2.83	2.83	787.01	-50.18	8.27	0.37
113	14.40	2.83	2.83	842.51	-53.72	8.85	-0.17
114	14.53	2.83	2.83	787.01	-50.18	8.27	-0.37
115	14.67	2.83	2.83	575.05	-36.67	6.04	-0.76
116	14.80	2.83	2.83	112.10	30.22	1.18	0.95
117	14.90	2.83	2.83	-19.09	299.40	3.15	-0.87
118	15.03	2.83	2.83	-36.39	570.69	6.00	-0.63
119	15.17	2.83	2.83	-44.10	691.65	7.27	-0.28
120	15.30	2.83	2.83	-45.94	720.39	7.57	-0.12
121	15.43	2.83	2.83	-44.10	691.65	7.27	0.28
122	15.57	2.83	2.83	-36.39	570.69	6.00	0.63
123	15.70	2.83	2.83	-19.09	299.40	3.15	0.87
124	15.80	2.83	2.83	112.10	30.22	1.18	-0.95
125	15.93	2.83	2.83	575.05	-36.67	6.04	0.76
126	16.07	2.83	2.83	787.01	-50.18	8.27	0.37
127	16.20	2.83	2.83	842.51	-53.72	8.85	-0.17
128	16.33	2.83	2.83	787.01	-50.18	8.27	-0.37
129	16.47	2.83	2.83	575.05	-36.67	6.04	-0.76
130	16.60	2.83	2.83	112.10	30.22	1.18	0.95
131	16.70	2.83	2.83	-19.09	299.40	3.15	-0.87
132	16.83	2.83	2.83	-36.39	570.69	6.00	-0.63
133	16.97	2.83	2.83	-44.10	691.65	7.27	-0.28
134	17.10	2.83	2.83	-45.94	720.39	7.57	-0.12
135	17.23	2.83	2.83	-44.10	691.65	7.27	0.28
136	17.37	2.83	2.83	-36.39	570.69	6.00	0.63
137	17.50	2.83	2.83	-19.09	299.40	3.15	0.87
138	17.60	2.83	2.83	112.10	30.22	1.18	-0.95
139	17.73	2.83	2.83	575.05	-36.67	6.04	0.76
140	17.87	2.83	2.83	787.01	-50.18	8.27	0.37
141	18.00	2.83	2.83	842.51	-53.72	8.85	-0.17
142	18.13	2.83	2.83	787.01	-50.18	8.27	-0.37
143	18.27	2.83	2.83	575.05	-36.67	6.04	-0.76
144	18.40	2.83	2.83	112.10	30.22	1.18	0.95
145	18.50	2.83	2.83	-19.09	299.40	3.15	-0.87
146	18.63	2.83	2.83	-36.39	570.69	6.00	-0.63
147	18.77	2.83	2.83	-44.10	691.65	7.27	-0.28
148	18.90	2.83	2.83	-45.94	720.39	7.57	-0.12
149	19.03	2.83	2.83	-44.10	691.65	7.27	0.28
150	19.17	2.83	2.83	-36.39	570.69	6.00	0.63

151	19.30	2.83	2.83	-19.09	299.40	3.15	0.87
152	19.40	2.83	2.83	112.10	30.22	1.18	-0.95
153	19.53	2.83	2.83	575.05	-36.67	6.04	0.76
154	19.67	2.83	2.83	787.01	-50.18	8.27	0.37
155	19.80	2.83	2.83	842.51	-53.72	8.85	-0.17
156	19.93	2.83	2.83	787.01	-50.18	8.27	-0.37
157	20.07	2.83	2.83	575.05	-36.67	6.04	-0.76
158	20.20	2.83	2.83	112.10	30.22	1.18	0.95
159	20.30	2.83	2.83	-19.09	299.40	3.15	-0.87
160	20.43	2.83	2.83	-36.39	570.69	6.00	-0.63
161	20.57	2.83	2.83	-44.10	691.65	7.27	-0.28
162	20.70	2.83	2.83	-45.94	720.39	7.57	-0.12
163	20.83	2.83	2.83	-44.10	691.65	7.27	0.28
164	20.97	2.83	2.83	-36.39	570.69	6.00	0.63
165	21.10	2.83	2.83	-19.09	299.40	3.15	0.87
166	21.20	2.83	2.83	112.10	30.22	1.18	-0.95
167	21.33	2.83	2.83	575.05	-36.67	6.04	0.76
168	21.47	2.83	2.83	787.01	-50.18	8.27	0.37
169	21.60	2.83	2.83	842.51	-53.72	8.85	-0.17
170	21.73	2.83	2.83	787.01	-50.18	8.27	-0.37
171	21.87	2.83	2.83	575.05	-36.67	6.04	-0.76
172	22.00	2.83	2.83	112.10	30.22	1.18	0.95
173	22.10	2.83	2.83	-19.09	299.40	3.15	-0.87
174	22.23	2.83	2.83	-36.39	570.69	6.00	-0.63
175	22.37	2.83	2.83	-44.10	691.65	7.27	-0.28
176	22.50	2.83	2.83	-45.94	720.39	7.57	-0.12
177	22.63	2.83	2.83	-44.10	691.65	7.27	0.28
178	22.77	2.83	2.83	-36.39	570.69	6.00	0.63
179	22.90	2.83	2.83	-19.09	299.40	3.15	0.87
180	23.00	2.83	2.83	112.10	30.22	1.18	-0.95
181	23.13	2.83	2.83	575.05	-36.67	6.04	0.76
182	23.27	2.83	2.83	787.01	-50.18	8.27	0.37
183	23.40	2.83	2.83	842.51	-53.72	8.85	-0.17
184	23.53	2.83	2.83	787.01	-50.18	8.27	-0.37
185	23.67	2.83	2.83	575.05	-36.67	6.04	-0.76
186	23.80	2.83	2.83	112.10	30.22	1.18	0.95
187	23.90	2.83	2.83	-19.09	299.40	3.15	-0.87
188	24.03	2.83	2.83	-36.39	570.68	6.00	-0.63
189	24.17	2.83	2.83	-44.10	691.64	7.27	-0.28
190	24.30	2.83	2.83	-45.94	720.38	7.57	-0.12
191	24.43	2.83	2.83	-44.10	691.64	7.27	0.28
192	24.57	2.83	2.83	-36.39	570.67	6.00	0.63
193	24.70	2.83	2.83	-19.09	299.38	3.15	0.87
194	24.80	2.83	2.83	112.12	30.22	1.18	-0.95
195	24.93	2.83	2.83	575.08	-36.67	6.04	0.76
196	25.07	2.83	2.83	787.05	-50.19	8.27	0.37
197	25.20	2.83	2.83	842.56	-53.73	8.85	-0.17
198	25.33	2.83	2.83	787.07	-50.19	8.27	-0.37
199	25.47	2.83	2.83	575.13	-36.67	6.04	-0.76
200	25.60	2.83	2.83	112.19	30.22	1.18	0.95
201	25.70	2.83	2.83	-19.08	299.26	3.14	-0.87
202	25.83	2.83	2.83	-36.38	570.51	6.00	-0.63
203	25.97	2.83	2.83	-44.09	691.42	7.27	-0.28
204	26.10	2.83	2.83	-45.92	720.11	7.57	-0.12
205	26.23	2.83	2.83	-44.08	691.29	7.26	0.28
206	26.37	2.83	2.83	-36.36	570.22	5.99	0.63
207	26.50	2.83	2.83	-19.05	298.78	3.14	0.86
208	26.60	2.83	2.83	112.72	30.22	1.18	-0.95
209	26.73	2.83	2.83	576.03	-36.73	6.05	0.76
210	26.87	2.83	2.83	788.26	-50.26	8.28	0.37
211	27.00	2.83	2.83	844.13	-53.83	8.87	-0.17
212	27.13	2.83	2.83	788.99	-50.31	8.29	-0.37
213	27.27	2.83	2.83	577.64	-36.83	6.07	-0.76
214	27.40	2.83	2.83	114.91	30.19	1.21	0.95
215	27.50	2.83	2.83	-18.81	295.06	3.10	-0.87
216	27.63	2.83	2.83	-36.05	565.28	5.94	-0.64
217	27.77	2.83	2.83	-43.66	684.72	7.20	-0.29
218	27.90	2.83	2.83	-45.40	711.91	7.48	-0.13
219	28.03	2.83	2.83	-43.40	680.68	7.15	0.32
220	28.17	2.83	2.83	-35.47	556.31	5.85	0.62
221	28.30	2.83	2.83	-17.86	280.09	2.94	0.85
222	28.40	2.83	2.83	131.31	30.12	1.38	-0.98
223	28.53	2.83	2.83	606.36	-38.66	6.37	0.73
224	28.67	2.83	2.83	828.06	-52.80	8.70	0.33
225	28.80	2.83	2.83	896.99	-57.20	9.43	-0.20
226	28.93	2.83	2.83	856.35	-54.61	9.00	-0.37
227	29.07	2.83	2.83	668.85	-42.65	7.03	-0.84

228	29.20	2.83	2.83	237.02	26.12	2.49	-0.98
229	29.33	2.83	2.83	-13.45	210.91	2.22	-0.89
230	29.47	2.83	2.83	-24.51	384.35	4.04	-0.66
231	29.60	2.83	2.83	-26.64	417.81	4.39	-0.41
232	29.73	2.83	2.83	-23.64	370.75	3.90	-0.36
233	29.87	2.83	2.83	20.39	293.45	3.08	-0.35
234	30.00	2.83	2.83	31.50	5.88	0.33	-0.33

Verifiche a fessurazione

Combinazione n° 19

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

A_{fs} area di armatura in corrispondenza del lembo di monte in [cmq]

A_{fi} area di armatura in corrispondenza del lembo di valle in [cmq]

M_{pr} Momento di prima fessurazione espressa in [kgm]

M Momento agente nella sezione espressa in [kgm]

ε_m deformazione media espressa in [%]

s_m Distanza media tra le fessure espressa in [mm]

w Apertura media della fessura espressa in [mm]

Verifica fessurazione paramento

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	0.00	10.05	8.04	-2448	0	0.0000	0.00	0.000
2	0.13	10.05	8.04	-2552	-3	0.0000	0.00	0.000
3	0.25	10.05	8.04	-2659	-15	0.0000	0.00	0.000
4	0.38	10.05	8.04	-2767	-36	0.0000	0.00	0.000
5	0.50	10.05	8.04	-2878	-69	0.0000	0.00	0.000
6	0.63	14.07	8.04	-3106	-114	0.0000	0.00	0.000
7	0.75	14.07	8.04	-3224	-179	0.0000	0.00	0.000
8	0.88	14.07	8.04	-3344	-266	0.0000	0.00	0.000
9	1.00	14.07	8.04	-3466	-379	0.0000	0.00	0.000
10	1.13	14.07	8.04	-3590	-519	0.0000	0.00	0.000
11	1.25	14.07	8.04	-3716	-690	0.0000	0.00	0.000
12	1.38	14.07	8.04	-3844	-892	0.0000	0.00	0.000
13	1.50	14.07	8.04	-3974	-1129	0.0000	0.00	0.000
14	1.63	14.07	8.04	-4106	-1401	0.0000	0.00	0.000
15	1.75	14.07	8.04	-4241	-1710	0.0000	0.00	0.000
16	1.88	14.07	8.04	-4377	-2059	0.0000	0.00	0.000
17	2.00	28.15	16.08	-5101	-2450	0.0000	0.00	0.000
18	2.13	14.07	8.04	-4656	-2883	0.0000	0.00	0.000
19	2.25	14.07	8.04	-4798	-3360	0.0000	0.00	0.000
20	2.38	14.07	8.04	-4943	-3884	0.0000	0.00	0.000
21	2.50	14.07	8.04	-5090	-4456	0.0000	0.00	0.000

Verifica fessurazione fondazione

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	-1.06	8.04	8.04	-4193	-14	0.0000	0.00	0.000
2	-0.99	8.04	8.04	4193	197	0.0000	0.00	0.000
3	-0.93	8.04	8.04	4193	319	0.0000	0.00	0.000
4	-0.86	8.04	8.04	4193	494	0.0000	0.00	0.000
5	-0.79	8.04	8.04	4193	699	0.0000	0.00	0.000
6	-0.73	8.04	8.04	4193	915	0.0000	0.00	0.000
7	-0.66	8.04	8.04	4193	1213	0.0000	0.00	0.000
8	-0.60	8.04	8.04	4193	1781	0.0000	0.00	0.000
9	-0.55	8.04	8.04	4193	2487	0.0000	0.00	0.000
10	-0.49	8.04	8.04	4193	3354	0.0000	0.00	0.000
11	-0.43	8.04	10.05	4267	4408	0.0367	146.68	0.092
12	0.00	8.04	8.04	-4193	-2054	0.0000	0.00	0.000
13	0.04	8.04	8.04	-4193	-1858	0.0000	0.00	0.000
14	0.11	8.04	8.04	-4193	-1557	0.0000	0.00	0.000
15	0.17	8.04	8.04	-4193	-1284	0.0000	0.00	0.000
16	0.24	8.04	8.04	-4193	-1037	0.0000	0.00	0.000
17	0.31	8.04	8.04	-4193	-816	0.0000	0.00	0.000
18	0.37	8.04	8.04	-4193	-621	0.0000	0.00	0.000
19	0.44	8.04	8.04	-4193	-453	0.0000	0.00	0.000
20	0.51	8.04	8.04	-4193	-311	0.0000	0.00	0.000
21	0.57	8.04	8.04	-4193	-203	0.0000	0.00	0.000
22	0.64	8.04	8.04	-4193	-118	0.0000	0.00	0.000
23	0.71	8.04	8.04	-4193	-56	0.0000	0.00	0.000
24	0.77	8.04	8.04	-4193	-16	0.0000	0.00	0.000
25	0.84	8.04	8.04	4193	2	0.0000	0.00	0.000

Analisi dei pali

Combinazione n° 19

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	7392.4
Verticale	[kg]	10294.0
Momento	[kgm]	-5130.8

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.23528
Verticale	[cm]	0.00524
Rotazione	[°]	-0.00493

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]
1	32	896	6824	0
2	33	17848	6824	0

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 19

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
A _f	area di armatura espressa in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cm ²]
σ _f	tensione nell'acciaio espressa in [kg/cm ²]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cm ²]
σ _{stf}	tensione nelle staffe espressa in [kg/cm ²]

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _f	σ _c	σ _f
1	0.00	0	896	6824	52.28	0.15	2.31
2	0.23	-1535	1177	6783	52.28	4.68	116.41
3	0.45	-3062	1456	6746	52.28	9.36	251.18
4	0.68	-4580	1732	6712	52.28	14.02	385.35
5	0.90	-6090	2005	5515	52.28	18.65	518.90
6	1.13	-7331	2276	4426	52.28	22.45	627.65
7	1.35	-8327	2543	3442	52.28	25.51	713.83
8	1.57	-9101	2807	2556	52.28	27.88	779.61
9	1.80	-9676	3069	1765	52.28	29.64	827.04
10	2.02	-10073	3328	1063	52.28	30.85	858.09
11	2.25	-10312	3584	445	52.28	31.58	874.62
12	2.48	-10412	3837	-96	52.28	31.88	878.37
13	2.70	-10391	4087	-564	52.28	31.81	870.95
14	2.93	-10264	4335	-966	52.28	31.41	853.86
15	3.15	-10046	4580	-1307	52.28	30.73	828.51
16	3.38	-9752	4821	-1593	52.28	29.82	796.15
17	3.60	-9394	5060	-1829	52.28	28.71	757.93
18	3.83	-8982	5296	-2020	52.28	27.43	714.92
19	4.05	-8528	5530	-2171	52.28	26.02	668.04
20	4.28	-8039	5760	-2287	52.28	24.51	618.13
21	4.50	-7525	5988	-2372	52.28	22.91	565.94
22	4.73	-6991	6213	-2431	52.28	21.25	512.14
23	4.95	-6444	6435	-2467	52.28	19.54	457.31
24	5.17	-5889	6654	-2484	52.28	17.80	401.96
25	5.40	-5330	6870	-2484	52.28	16.05	346.56
26	5.63	-4771	7083	-2472	52.28	14.29	291.54
27	5.85	-4215	7294	-2449	52.28	12.53	237.38
28	6.08	-3664	7502	-2418	52.28	10.77	184.58
29	6.30	-3119	7776	-2253	52.28	9.02	132.79
30	6.53	-2612	8059	-2068	52.28	7.38	89.41
31	6.75	-2147	8341	-1870	52.28	5.93	73.93
32	6.98	-1726	8624	-1664	52.28	4.73	60.81
33	7.20	-1352	8907	-1455	52.28	3.86	50.94
34	7.42	-1024	9190	-1246	52.28	3.28	44.20
35	7.65	-744	9472	-1039	52.28	2.86	39.32

36	7.88	-510	9755	-836	52.28	2.52	35.38
37	8.10	-322	10038	-638	52.28	2.26	32.35
38	8.33	-179	10321	-447	52.28	2.07	30.22
39	8.55	-78	10603	-263	52.28	1.95	28.94
40	8.78	-19	10886	-85	52.28	1.91	28.48
41	9.00	0	11169	-85	52.28	1.92	28.83

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	σ _c	σ _r
1	0.00	0	17848	6824	52.28	3.07	46.07
2	0.23	-1535	18127	6783	52.28	5.66	77.47
3	0.45	-3062	18400	6746	52.28	8.56	112.15
4	0.68	-4580	18667	6712	52.28	12.59	158.07
5	0.90	-6090	18927	5515	52.28	17.20	208.44
6	1.13	-7331	19180	4426	52.28	21.09	297.05
7	1.35	-8327	19426	3442	52.28	24.22	377.18
8	1.57	-9101	19665	2556	52.28	26.64	439.91
9	1.80	-9676	19897	1765	52.28	28.44	485.98
10	2.02	-10073	20123	1063	52.28	29.67	516.76
11	2.25	-10312	20342	445	52.28	30.40	533.81
12	2.48	-10412	20554	-96	52.28	30.69	538.72
13	2.70	-10391	20759	-564	52.28	30.60	533.02
14	2.93	-10264	20958	-966	52.28	30.18	518.21
15	3.15	-10046	21150	-1307	52.28	29.47	495.67
16	3.38	-9752	21334	-1593	52.28	28.52	466.71
17	3.60	-9394	21513	-1829	52.28	27.37	432.55
18	3.83	-8982	21684	-2020	52.28	26.05	394.34
19	4.05	-8528	21849	-2171	52.28	24.59	353.18
20	4.28	-8039	22006	-2287	52.28	23.02	310.09
21	4.50	-7525	22157	-2372	52.28	21.38	266.11
22	4.73	-6991	22302	-2431	52.28	19.69	239.40
23	4.95	-6444	22439	-2467	52.28	17.97	221.08
24	5.17	-5889	22570	-2484	52.28	16.27	202.65
25	5.40	-5330	22694	-2484	52.28	14.62	184.49
26	5.63	-4771	22811	-2472	52.28	13.05	167.03
27	5.85	-4215	22921	-2449	52.28	11.61	150.72
28	6.08	-3664	23025	-2418	52.28	10.33	135.95
29	6.30	-3119	23287	-2253	52.28	9.25	123.30
30	6.53	-2612	23570	-2068	52.28	8.38	113.07
31	6.75	-2147	23853	-1870	52.28	7.66	104.48
32	6.98	-1726	24136	-1664	52.28	7.01	96.80
33	7.20	-1352	24418	-1455	52.28	6.44	90.05
34	7.42	-1024	24701	-1246	52.28	5.95	84.23
35	7.65	-744	24984	-1039	52.28	5.53	79.36
36	7.88	-510	25266	-836	52.28	5.19	75.42
37	8.10	-322	25549	-638	52.28	4.93	72.40
38	8.33	-179	25832	-447	52.28	4.74	70.26
39	8.55	-78	26115	-263	52.28	4.62	68.98
40	8.78	-19	26397	-85	52.28	4.57	68.53
41	9.00	0	26680	-85	52.28	4.59	68.87

COMBINAZIONE n° 20

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	728.03	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	44.05	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	343.73	[kg]		
Inerzia verticale del muro	-171.86	[kg]		
Inerzia del terrapieno fondazione di monte	336.30	[kg]		
Inerzia verticale del terrapieno fondazione di monte	-168.15	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	6945.02	[kg]
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Risultante dei carichi applicati in dir. verticale	9502.48	[kg]
Sforzo normale sul piano di posa della fondazione	9502.48	[kg]
Sforzo tangenziale sul piano di posa della fondazione	6945.02	[kg]
Eccentricità rispetto al baricentro della fondazione	0.50	[m]
Lunghezza fondazione reagente	1.35	[m]
Risultante in fondazione	11769.89	[kg]
Inclinazione della risultante (rispetto alla normale)	36.16	[°]
Momento rispetto al baricentro della fondazione	4752.69	[kgm]

Sollecitazioni paramento

Combinazione n° 20

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	2.57	45.69
3	0.25	191.59	11.32	103.99
4	0.38	290.45	27.84	174.92
5	0.50	391.36	53.69	258.82
6	0.63	494.32	91.19	371.87
7	0.75	599.32	145.33	529.43
8	0.88	706.36	220.58	712.03
9	1.00	815.45	319.48	913.42
10	1.13	926.58	444.31	1132.37
11	1.25	1039.77	597.19	1367.95
12	1.38	1154.99	780.14	1619.45
13	1.50	1272.26	995.12	1886.32
14	1.63	1391.58	1244.00	2168.11
15	1.75	1512.94	1528.62	2464.46
16	1.88	1636.35	1850.78	2775.08
17	2.00	1761.80	2212.24	3099.74
18	2.13	1889.30	2614.74	3438.23
19	2.25	2018.84	3059.98	3790.41
20	2.38	2150.43	3549.66	4156.13
21	2.50	2284.06	4085.40	4533.17

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 20

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-12.80	2.51	-972.86	1852.87
2	0.07	-107.31	181.77	0.00	1806.16
3	0.13	-95.44	293.94	0.00	2398.79
4	0.20	0.00	455.27	0.00	4108.35
5	0.27	0.00	643.38	0.00	5821.80
6	0.33	0.00	841.94	0.00	7618.00
7	0.40	0.00	1115.55	0.00	9570.38
8	0.46	0.00	1638.83	-279.54	11596.62
9	0.52	0.00	2289.28	-1004.39	13830.19
10	0.57	0.00	3089.00	-2363.03	16257.37
11	0.63	0.00	4060.66	-2406.28	18031.45
12	1.06	-2056.23	0.00	-5006.92	0.00
13	1.10	-1859.93	0.00	-4772.01	0.00
14	1.17	-1559.31	0.00	-4335.33	0.00
15	1.23	-1286.25	0.00	-3928.28	0.00
16	1.30	-1039.09	0.00	-3529.03	0.00
17	1.37	-818.09	0.00	-3131.43	0.00
18	1.43	-623.38	0.00	-2734.98	0.00
19	1.50	-454.97	0.00	-2339.39	0.00
20	1.57	-312.88	0.00	-1944.52	0.00
21	1.63	-203.76	0.00	-1550.33	0.00
22	1.70	-118.03	0.00	-1156.81	0.00
23	1.77	-55.36	0.00	-764.05	0.00
24	1.83	-15.50	0.00	-417.41	0.00
25	1.90	0.00	2.21	-93.32	27.15

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-776.11	39.61	-858.81	308.75
2	0.13	-724.98	37.18	-2622.65	1748.75
3	0.27	-529.72	28.94	-4296.30	3709.73
4	0.40	-103.26	27.82	-4338.60	5081.07
5	0.50	-8.61	275.76	-4365.57	3491.32
6	0.63	-28.07	525.72	-3267.82	2026.72
7	0.77	-39.94	637.14	-1924.88	968.03
8	0.90	-43.53	663.62	-648.89	648.89
9	1.03	-39.94	637.14	-968.03	1924.88
10	1.17	-28.07	525.72	-2026.72	3267.82
11	1.30	-8.61	275.76	-3491.32	4365.57
12	1.40	-103.26	27.82	-5081.07	4338.60
13	1.53	-529.72	28.94	-3709.73	4296.30
14	1.67	-724.98	37.18	-1748.75	2622.65
15	1.80	-776.11	39.61	-858.81	858.81
16	1.93	-724.98	37.18	-2622.65	1748.75
17	2.07	-529.72	28.94	-4296.30	3709.73
18	2.20	-103.26	27.82	-4338.60	5081.07
19	2.30	-8.61	275.76	-4365.57	3491.32
20	2.43	-28.07	525.72	-3267.82	2026.72
21	2.57	-39.94	637.14	-1924.88	968.03
22	2.70	-43.53	663.62	-648.89	648.89
23	2.83	-39.94	637.14	-968.03	1924.88
24	2.97	-28.07	525.72	-2026.72	3267.82
25	3.10	-8.61	275.76	-3491.32	4365.57
26	3.20	-103.26	27.82	-5081.07	4338.60
27	3.33	-529.72	28.94	-3709.73	4296.30
28	3.47	-724.98	37.18	-1748.75	2622.65
29	3.60	-776.11	39.61	-858.81	858.81
30	3.73	-724.98	37.18	-2622.65	1748.75
31	3.87	-529.72	28.94	-4296.30	3709.73
32	4.00	-103.26	27.82	-4338.60	5081.07
33	4.10	-8.61	275.76	-4365.57	3491.32

34	4.23	-28.07	525.72	-3267.82	2026.72
35	4.37	-39.94	637.14	-1924.88	968.03
36	4.50	-43.53	663.62	-648.89	648.89
37	4.63	-39.94	637.14	-968.03	1924.88
38	4.77	-28.07	525.72	-2026.72	3267.82
39	4.90	-8.61	275.76	-3491.32	4365.57
40	5.00	-103.26	27.82	-5081.07	4338.60
41	5.13	-529.72	28.94	-3709.73	4296.30
42	5.27	-724.98	37.18	-1748.75	2622.65
43	5.40	-776.11	39.61	-858.81	858.81
44	5.53	-724.98	37.18	-2622.65	1748.75
45	5.67	-529.72	28.94	-4296.30	3709.73
46	5.80	-103.26	27.82	-4338.60	5081.07
47	5.90	-8.61	275.76	-4365.57	3491.32
48	6.03	-28.07	525.72	-3267.82	2026.72
49	6.17	-39.94	637.14	-1924.88	968.03
50	6.30	-43.53	663.62	-648.89	648.89
51	6.43	-39.94	637.14	-968.03	1924.88
52	6.57	-28.07	525.72	-2026.72	3267.82
53	6.70	-8.61	275.76	-3491.32	4365.57
54	6.80	-103.26	27.82	-5081.07	4338.60
55	6.93	-529.72	28.94	-3709.73	4296.30
56	7.07	-724.98	37.18	-1748.75	2622.65
57	7.20	-776.11	39.61	-858.81	858.81
58	7.33	-724.98	37.18	-2622.65	1748.75
59	7.47	-529.72	28.94	-4296.30	3709.73
60	7.60	-103.26	27.82	-4338.60	5081.07
61	7.70	-8.61	275.76	-4365.57	3491.32
62	7.83	-28.07	525.72	-3267.82	2026.72
63	7.97	-39.94	637.14	-1924.88	968.03
64	8.10	-43.53	663.62	-648.89	648.89
65	8.23	-39.94	637.14	-968.03	1924.88
66	8.37	-28.07	525.72	-2026.72	3267.82
67	8.50	-8.61	275.76	-3491.32	4365.57
68	8.60	-103.26	27.82	-5081.07	4338.60
69	8.73	-529.72	28.94	-3709.73	4296.30
70	8.87	-724.98	37.18	-1748.75	2622.65
71	9.00	-776.11	39.61	-858.81	858.81
72	9.13	-724.98	37.18	-2622.65	1748.75
73	9.27	-529.72	28.94	-4296.30	3709.73
74	9.40	-103.26	27.82	-4338.60	5081.07
75	9.50	-8.61	275.76	-4365.57	3491.32
76	9.63	-28.07	525.72	-3267.82	2026.72
77	9.77	-39.94	637.14	-1924.88	968.03
78	9.90	-43.53	663.62	-648.89	648.89
79	10.03	-39.94	637.14	-968.03	1924.88
80	10.17	-28.07	525.72	-2026.72	3267.82
81	10.30	-8.61	275.76	-3491.32	4365.57
82	10.40	-103.26	27.82	-5081.07	4338.60
83	10.53	-529.72	28.94	-3709.73	4296.30
84	10.67	-724.98	37.18	-1748.75	2622.65
85	10.80	-776.11	39.61	-858.81	858.81
86	10.93	-724.98	37.18	-2622.65	1748.75
87	11.07	-529.72	28.94	-4296.30	3709.73
88	11.20	-103.26	27.82	-4338.60	5081.07
89	11.30	-8.61	275.76	-4365.57	3491.32
90	11.43	-28.07	525.72	-3267.82	2026.72
91	11.57	-39.94	637.14	-1924.88	968.03
92	11.70	-43.53	663.62	-648.89	648.89
93	11.83	-39.94	637.14	-968.03	1924.88
94	11.97	-28.07	525.72	-2026.72	3267.82
95	12.10	-8.61	275.76	-3491.32	4365.57
96	12.20	-103.26	27.82	-5081.07	4338.60
97	12.33	-529.72	28.94	-3709.73	4296.30
98	12.47	-724.98	37.18	-1748.75	2622.65
99	12.60	-776.11	39.61	-858.81	858.81
100	12.73	-724.98	37.18	-2622.65	1748.75
101	12.87	-529.72	28.94	-4296.30	3709.73
102	13.00	-103.26	27.82	-4338.60	5081.07
103	13.10	-8.61	275.76	-4365.57	3491.32
104	13.23	-28.07	525.72	-3267.82	2026.72
105	13.37	-39.94	637.14	-1924.88	968.03
106	13.50	-43.53	663.62	-648.89	648.89
107	13.63	-39.94	637.14	-968.03	1924.88
108	13.77	-28.07	525.72	-2026.72	3267.82
109	13.90	-8.61	275.76	-3491.32	4365.57
110	14.00	-103.26	27.82	-5081.07	4338.60

111	14.13	-529.72	28.94	-3709.73	4296.30
112	14.27	-724.98	37.18	-1748.75	2622.65
113	14.40	-776.11	39.61	-858.81	858.81
114	14.53	-724.98	37.18	-2622.65	1748.75
115	14.67	-529.72	28.94	-4296.30	3709.73
116	14.80	-103.26	27.82	-4338.60	5081.07
117	14.90	-8.61	275.76	-4365.57	3491.32
118	15.03	-28.07	525.72	-3267.82	2026.72
119	15.17	-39.94	637.14	-1924.88	968.03
120	15.30	-43.53	663.62	-648.89	648.89
121	15.43	-39.94	637.14	-968.03	1924.88
122	15.57	-28.07	525.72	-2026.72	3267.82
123	15.70	-8.61	275.76	-3491.32	4365.57
124	15.80	-103.26	27.82	-5081.07	4338.60
125	15.93	-529.72	28.94	-3709.73	4296.30
126	16.07	-724.98	37.18	-1748.75	2622.65
127	16.20	-776.11	39.61	-858.81	858.81
128	16.33	-724.98	37.18	-2622.65	1748.75
129	16.47	-529.72	28.94	-4296.30	3709.73
130	16.60	-103.26	27.82	-4338.60	5081.07
131	16.70	-8.61	275.76	-4365.57	3491.32
132	16.83	-28.07	525.72	-3267.82	2026.72
133	16.97	-39.94	637.14	-1924.88	968.03
134	17.10	-43.53	663.62	-648.89	648.89
135	17.23	-39.94	637.14	-968.03	1924.88
136	17.37	-28.07	525.72	-2026.72	3267.82
137	17.50	-8.61	275.76	-3491.32	4365.57
138	17.60	-103.26	27.82	-5081.07	4338.60
139	17.73	-529.72	28.94	-3709.73	4296.30
140	17.87	-724.98	37.18	-1748.75	2622.65
141	18.00	-776.11	39.61	-858.81	858.81
142	18.13	-724.98	37.18	-2622.65	1748.75
143	18.27	-529.72	28.94	-4296.30	3709.73
144	18.40	-103.26	27.82	-4338.60	5081.07
145	18.50	-8.61	275.76	-4365.57	3491.32
146	18.63	-28.07	525.72	-3267.82	2026.72
147	18.77	-39.94	637.14	-1924.88	968.03
148	18.90	-43.53	663.62	-648.89	648.89
149	19.03	-39.94	637.14	-968.03	1924.88
150	19.17	-28.07	525.72	-2026.72	3267.82
151	19.30	-8.61	275.76	-3491.32	4365.57
152	19.40	-103.26	27.82	-5081.07	4338.60
153	19.53	-529.72	28.94	-3709.73	4296.30
154	19.67	-724.98	37.18	-1748.75	2622.65
155	19.80	-776.11	39.61	-858.81	858.81
156	19.93	-724.98	37.18	-2622.65	1748.75
157	20.07	-529.72	28.94	-4296.30	3709.73
158	20.20	-103.26	27.82	-4338.60	5081.07
159	20.30	-8.61	275.76	-4365.57	3491.32
160	20.43	-28.07	525.72	-3267.82	2026.72
161	20.57	-39.94	637.14	-1924.88	968.03
162	20.70	-43.53	663.62	-648.89	648.89
163	20.83	-39.94	637.14	-968.03	1924.88
164	20.97	-28.07	525.72	-2026.72	3267.82
165	21.10	-8.61	275.76	-3491.32	4365.57
166	21.20	-103.26	27.82	-5081.07	4338.60
167	21.33	-529.72	28.93	-3709.73	4296.30
168	21.47	-724.98	37.18	-1748.75	2622.65
169	21.60	-776.11	39.61	-858.81	858.81
170	21.73	-724.98	37.18	-2622.65	1748.75
171	21.87	-529.72	28.93	-4296.30	3709.73
172	22.00	-103.26	27.82	-4338.60	5081.07
173	22.10	-8.61	275.76	-4365.57	3491.32
174	22.23	-28.07	525.72	-3267.82	2026.72
175	22.37	-39.94	637.14	-1924.88	968.03
176	22.50	-43.54	663.62	-648.89	648.89
177	22.63	-39.94	637.14	-968.03	1924.87
178	22.77	-28.07	525.72	-2026.72	3267.82
179	22.90	-8.62	275.76	-3491.32	4365.57
180	23.00	-103.26	27.82	-5081.07	4338.60
181	23.13	-529.72	28.93	-3709.73	4296.29
182	23.27	-724.98	37.17	-1748.75	2622.64
183	23.40	-776.11	39.59	-858.82	858.81
184	23.53	-724.98	37.16	-2622.65	1748.73
185	23.67	-529.73	28.92	-4296.31	3709.71
186	23.80	-103.26	27.82	-4338.61	5081.07
187	23.90	-8.64	275.76	-4365.58	3491.31

188	24.03	-28.10	525.71	-3267.83	2026.71
189	24.17	-39.98	637.14	-1924.89	968.02
190	24.30	-43.58	663.61	-648.91	648.86
191	24.43	-40.00	637.13	-968.06	1924.84
192	24.57	-28.14	525.70	-2026.75	3267.77
193	24.70	-8.70	275.74	-3491.37	4365.51
194	24.80	-103.27	27.82	-5081.20	4338.54
195	24.93	-529.75	28.81	-3709.61	4296.21
196	25.07	-725.02	37.03	-1748.64	2622.54
197	25.20	-776.15	39.43	-858.99	858.67
198	25.33	-725.04	36.97	-2622.87	1748.11
199	25.47	-529.80	28.68	-4296.59	3709.15
200	25.60	-103.34	27.82	-4338.94	5081.10
201	25.70	-8.99	275.63	-4365.92	3491.06
202	25.83	-28.52	525.55	-3268.25	2026.38
203	25.97	-40.48	636.94	-1925.44	967.62
204	26.10	-44.18	663.36	-649.62	647.93
205	26.23	-40.70	636.81	-968.86	1923.67
206	26.37	-29.01	525.29	-2027.70	3266.25
207	26.50	-9.78	275.19	-3492.72	4363.64
208	26.60	-103.83	27.81	-5084.95	4336.68
209	26.73	-530.63	27.30	-3706.03	4293.76
210	26.87	-726.14	35.20	-1745.34	2619.39
211	27.00	-777.60	37.27	-864.20	854.62
212	27.13	-726.81	34.33	-2629.57	1729.32
213	27.27	-532.11	25.43	-4305.36	3692.01
214	27.40	-105.84	27.79	-4349.15	5082.18
215	27.50	-13.80	271.76	-4376.16	3483.44
216	27.63	-34.23	520.73	-3280.98	2016.54
217	27.77	-47.37	630.76	-1941.92	955.64
218	27.90	-52.49	655.80	-670.97	620.20
219	28.03	-50.52	627.04	-993.98	1888.98
220	28.17	-40.71	512.47	-2058.22	3221.66
221	28.30	-23.67	257.98	-3537.16	4309.42
222	28.40	-120.96	27.73	-5210.09	4282.74
223	28.53	-558.56	10.77	-3618.65	4222.78
224	28.67	-762.80	18.10	-1710.61	2528.36
225	28.80	-826.30	21.10	-1018.73	736.72
226	28.93	-788.86	21.52	-2838.43	1127.48
227	29.07	-616.14	20.54	-4594.28	3122.76
228	29.20	-218.34	24.06	-4568.89	5080.61
229	29.33	0.00	194.30	-4600.08	2887.83
230	29.47	0.00	354.07	-3563.37	1315.28
231	29.60	0.00	384.91	-2565.84	347.30
232	29.73	-0.13	341.58	-1887.29	9.76
233	29.87	-18.76	270.40	-1781.76	108.30
234	30.00	-28.91	8.75	-1814.37	103.16

Armature e tensioni nei materiali del muro

Combinazione n° 20

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta sul lembo di monte in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta sul lembo di valle in [kg/cmq]

Nr.	Y	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fs}	σ _{fi}
1	0.00	100, 30	10.05	8.04	0.00	0.00	0.00	0.00
2	0.13	100, 31	10.05	8.04	0.04	0.02	-0.25	-0.60
3	0.25	100, 31	10.05	8.04	0.12	0.04	-0.12	-1.58
4	0.38	100, 32	10.05	8.04	0.24	0.07	1.02	-3.16
5	0.50	100, 33	10.05	8.04	0.45	0.10	4.73	-5.61
6	0.63	100, 33	14.07	8.04	0.70	0.14	9.55	-8.57
7	0.75	100, 34	14.07	8.04	1.08	0.20	19.05	-12.75
8	0.88	100, 35	14.07	8.04	1.57	0.27	33.22	-18.15
9	1.00	100, 35	14.07	8.04	2.18	0.33	52.39	-24.82
10	1.13	100, 36	14.07	8.04	2.92	0.40	76.75	-32.78
11	1.25	100, 37	14.07	8.04	3.78	0.48	106.47	-42.06
12	1.38	100, 37	14.07	8.04	4.76	0.56	141.68	-52.68

13	1.50	100, 38	14.07	8.04	5.86	0.64	182.48	-64.63
14	1.63	100, 39	14.07	8.04	7.08	0.72	228.95	-77.93
15	1.75	100, 39	14.07	8.04	8.43	0.80	281.16	-92.58
16	1.88	100, 40	14.07	8.04	9.88	0.89	339.16	-108.56
17	2.00	100, 40	28.15	16.08	8.44	0.97	207.34	-99.82
18	2.13	100, 41	14.07	8.04	13.15	1.06	472.70	-144.51
19	2.25	100, 42	14.07	8.04	14.95	1.15	548.30	-164.45
20	2.38	100, 42	14.07	8.04	16.85	1.24	629.82	-185.68
21	2.50	100, 43	14.07	8.04	18.87	1.33	717.26	-208.19

Armature e tensioni nei materiali della fondazione

Combinazione n° 20

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta in corrispondenza del lembo inferiore in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta in corrispondenza del lembo superiore in [kg/cmq]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.08	0.20	0.91	4.63
2	0.07	100, 40	8.04	8.04	1.15	0.25	65.77	38.83
3	0.13	100, 40	8.04	8.04	1.86	0.56	106.36	34.53
4	0.20	100, 40	8.04	8.04	2.89	0.85	164.74	-26.45
5	0.27	100, 40	8.04	8.04	4.08	1.14	232.80	-37.37
6	0.33	100, 40	8.04	8.04	5.34	1.42	304.65	-48.91
7	0.40	100, 40	8.04	8.04	7.08	1.71	403.65	-64.80
8	0.46	100, 40	8.04	8.04	10.39	1.96	593.00	-95.20
9	0.52	100, 40	8.04	8.04	14.52	2.20	828.36	-132.98
10	0.57	100, 40	8.04	8.04	19.59	2.45	1117.73	-179.43
11	0.63	100, 40	8.04	10.05	23.60	2.68	1183.29	-229.31

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.01	-0.02	0.80	-0.13
2	0.07	100, 40	8.04	8.04	0.10	-0.11	-0.90	5.61
3	0.13	100, 40	8.04	8.04	0.35	-0.23	-3.22	20.03
4	0.20	100, 40	8.04	8.04	0.75	-0.34	-6.86	42.71
5	0.27	100, 40	8.04	8.04	1.29	-0.45	-11.84	73.73
6	0.33	100, 40	8.04	8.04	1.98	-0.57	-18.17	113.21
7	0.40	100, 40	8.04	8.04	2.89	-0.68	-26.43	164.63
8	0.47	100, 40	8.04	8.04	3.95	-0.79	-36.21	225.56
9	0.53	100, 40	8.04	8.04	5.19	-0.91	-47.52	296.02
10	0.60	100, 40	8.04	8.04	6.59	-1.02	-60.36	375.99
11	0.67	100, 40	8.04	8.04	8.16	-1.13	-74.72	465.42
12	0.73	100, 40	8.04	8.04	9.89	-1.25	-90.58	564.23
13	0.80	100, 40	8.04	8.04	11.80	-1.36	-108.04	673.00
14	0.84	100, 40	8.04	8.04	13.04	-1.43	-119.44	744.03

Armature e tensioni piastre

Combinazione n° 20

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	-2.54	39.76	0.42	0.01
2	0.13	2.83	2.83	-2.38	37.32	0.39	0.01
3	0.27	2.83	2.83	-1.85	29.04	0.31	0.02

4	0.40	2.83	2.83	1.30	12.73	0.13	-0.03
5	0.50	2.83	2.83	8.64	0.61	0.09	-0.04
6	0.63	2.83	2.83	28.17	-1.80	0.30	-0.03
7	0.77	2.83	2.83	40.09	-2.56	0.42	-0.02
8	0.90	2.83	2.83	43.69	-2.79	0.46	0.01
9	1.03	2.83	2.83	40.09	-2.56	0.42	0.02
10	1.17	2.83	2.83	28.17	-1.80	0.30	0.03
11	1.30	2.83	2.83	8.64	0.61	0.09	0.04
12	1.40	2.83	2.83	1.30	12.73	0.13	0.03
13	1.53	2.83	2.83	-1.85	29.04	0.31	-0.02
14	1.67	2.83	2.83	-2.38	37.32	0.39	-0.01
15	1.80	2.83	2.83	-2.54	39.76	0.42	0.01
16	1.93	2.83	2.83	-2.38	37.32	0.39	0.01
17	2.07	2.83	2.83	-1.85	29.04	0.31	0.02
18	2.20	2.83	2.83	1.30	12.73	0.13	-0.03
19	2.30	2.83	2.83	8.64	0.61	0.09	-0.04
20	2.43	2.83	2.83	28.17	-1.80	0.30	-0.03
21	2.57	2.83	2.83	40.09	-2.56	0.42	-0.02
22	2.70	2.83	2.83	43.69	-2.79	0.46	0.01
23	2.83	2.83	2.83	40.09	-2.56	0.42	0.02
24	2.97	2.83	2.83	28.17	-1.80	0.30	0.03
25	3.10	2.83	2.83	8.64	0.61	0.09	0.04
26	3.20	2.83	2.83	1.30	12.73	0.13	0.03
27	3.33	2.83	2.83	-1.85	29.04	0.31	-0.02
28	3.47	2.83	2.83	-2.38	37.32	0.39	-0.01
29	3.60	2.83	2.83	-2.54	39.76	0.42	0.01
30	3.73	2.83	2.83	-2.38	37.32	0.39	0.01
31	3.87	2.83	2.83	-1.85	29.04	0.31	0.02
32	4.00	2.83	2.83	1.30	12.73	0.13	-0.03
33	4.10	2.83	2.83	8.64	0.61	0.09	-0.04
34	4.23	2.83	2.83	28.17	-1.80	0.30	-0.03
35	4.37	2.83	2.83	40.09	-2.56	0.42	-0.02
36	4.50	2.83	2.83	43.69	-2.79	0.46	0.01
37	4.63	2.83	2.83	40.09	-2.56	0.42	0.02
38	4.77	2.83	2.83	28.17	-1.80	0.30	0.03
39	4.90	2.83	2.83	8.64	0.61	0.09	0.04
40	5.00	2.83	2.83	1.30	12.73	0.13	0.03
41	5.13	2.83	2.83	-1.85	29.04	0.31	-0.02
42	5.27	2.83	2.83	-2.38	37.32	0.39	-0.01
43	5.40	2.83	2.83	-2.54	39.76	0.42	0.01
44	5.53	2.83	2.83	-2.38	37.32	0.39	0.01
45	5.67	2.83	2.83	-1.85	29.04	0.31	0.02
46	5.80	2.83	2.83	1.30	12.73	0.13	-0.03
47	5.90	2.83	2.83	8.64	0.61	0.09	-0.04
48	6.03	2.83	2.83	28.17	-1.80	0.30	-0.03
49	6.17	2.83	2.83	40.09	-2.56	0.42	-0.02
50	6.30	2.83	2.83	43.69	-2.79	0.46	0.01
51	6.43	2.83	2.83	40.09	-2.56	0.42	0.02
52	6.57	2.83	2.83	28.17	-1.80	0.30	0.03
53	6.70	2.83	2.83	8.64	0.61	0.09	0.04
54	6.80	2.83	2.83	1.30	12.73	0.13	0.03
55	6.93	2.83	2.83	-1.85	29.04	0.31	-0.02
56	7.07	2.83	2.83	-2.38	37.32	0.39	-0.01
57	7.20	2.83	2.83	-2.54	39.76	0.42	0.01
58	7.33	2.83	2.83	-2.38	37.32	0.39	0.01
59	7.47	2.83	2.83	-1.85	29.04	0.31	0.02
60	7.60	2.83	2.83	1.30	12.73	0.13	-0.03
61	7.70	2.83	2.83	8.64	0.61	0.09	-0.04
62	7.83	2.83	2.83	28.17	-1.80	0.30	-0.03
63	7.97	2.83	2.83	40.09	-2.56	0.42	-0.02
64	8.10	2.83	2.83	43.69	-2.79	0.46	-0.01
65	8.23	2.83	2.83	40.09	-2.56	0.42	0.02
66	8.37	2.83	2.83	28.17	-1.80	0.30	0.03
67	8.50	2.83	2.83	8.64	0.61	0.09	0.04
68	8.60	2.83	2.83	1.30	12.73	0.13	0.03
69	8.73	2.83	2.83	-1.85	29.04	0.31	-0.02
70	8.87	2.83	2.83	-2.38	37.32	0.39	-0.01
71	9.00	2.83	2.83	-2.54	39.76	0.42	-0.01
72	9.13	2.83	2.83	-2.38	37.32	0.39	0.01
73	9.27	2.83	2.83	-1.85	29.04	0.31	0.02
74	9.40	2.83	2.83	1.30	12.73	0.13	-0.03
75	9.50	2.83	2.83	8.64	0.61	0.09	-0.04
76	9.63	2.83	2.83	28.17	-1.80	0.30	-0.03
77	9.77	2.83	2.83	40.09	-2.56	0.42	-0.02
78	9.90	2.83	2.83	43.69	-2.79	0.46	-0.01
79	10.03	2.83	2.83	40.09	-2.56	0.42	0.02
80	10.17	2.83	2.83	28.17	-1.80	0.30	0.03

81	10.30	2.83	2.83	8.64	0.61	0.09	0.04
82	10.40	2.83	2.83	1.30	12.73	0.13	0.03
83	10.53	2.83	2.83	-1.85	29.04	0.31	-0.02
84	10.67	2.83	2.83	-2.38	37.32	0.39	-0.01
85	10.80	2.83	2.83	-2.54	39.76	0.42	-0.01
86	10.93	2.83	2.83	-2.38	37.32	0.39	0.01
87	11.07	2.83	2.83	-1.85	29.04	0.31	0.02
88	11.20	2.83	2.83	1.30	12.73	0.13	-0.03
89	11.30	2.83	2.83	8.64	0.61	0.09	-0.04
90	11.43	2.83	2.83	28.17	-1.80	0.30	-0.03
91	11.57	2.83	2.83	40.09	-2.56	0.42	-0.02
92	11.70	2.83	2.83	43.69	-2.79	0.46	-0.01
93	11.83	2.83	2.83	40.09	-2.56	0.42	0.02
94	11.97	2.83	2.83	28.17	-1.80	0.30	0.03
95	12.10	2.83	2.83	8.64	0.61	0.09	0.04
96	12.20	2.83	2.83	1.30	12.73	0.13	0.03
97	12.33	2.83	2.83	-1.85	29.04	0.31	-0.02
98	12.47	2.83	2.83	-2.38	37.32	0.39	-0.01
99	12.60	2.83	2.83	-2.54	39.76	0.42	-0.01
100	12.73	2.83	2.83	-2.38	37.32	0.39	0.01
101	12.87	2.83	2.83	-1.85	29.04	0.31	0.02
102	13.00	2.83	2.83	1.30	12.73	0.13	-0.03
103	13.10	2.83	2.83	8.64	0.61	0.09	-0.04
104	13.23	2.83	2.83	28.17	-1.80	0.30	-0.03
105	13.37	2.83	2.83	40.09	-2.56	0.42	-0.02
106	13.50	2.83	2.83	43.69	-2.79	0.46	-0.01
107	13.63	2.83	2.83	40.09	-2.56	0.42	0.02
108	13.77	2.83	2.83	28.17	-1.80	0.30	0.03
109	13.90	2.83	2.83	8.64	0.61	0.09	0.04
110	14.00	2.83	2.83	1.30	12.73	0.13	0.03
111	14.13	2.83	2.83	-1.85	29.04	0.31	-0.02
112	14.27	2.83	2.83	-2.38	37.32	0.39	-0.01
113	14.40	2.83	2.83	-2.54	39.76	0.42	-0.01
114	14.53	2.83	2.83	-2.38	37.32	0.39	0.01
115	14.67	2.83	2.83	-1.85	29.04	0.31	0.02
116	14.80	2.83	2.83	1.30	12.73	0.13	-0.03
117	14.90	2.83	2.83	8.64	0.61	0.09	-0.04
118	15.03	2.83	2.83	28.17	-1.80	0.30	-0.03
119	15.17	2.83	2.83	40.09	-2.56	0.42	-0.02
120	15.30	2.83	2.83	43.69	-2.79	0.46	-0.01
121	15.43	2.83	2.83	40.09	-2.56	0.42	0.02
122	15.57	2.83	2.83	28.17	-1.80	0.30	0.03
123	15.70	2.83	2.83	8.64	0.61	0.09	0.04
124	15.80	2.83	2.83	1.30	12.73	0.13	0.03
125	15.93	2.83	2.83	-1.85	29.04	0.31	-0.02
126	16.07	2.83	2.83	-2.38	37.32	0.39	-0.01
127	16.20	2.83	2.83	-2.54	39.76	0.42	-0.01
128	16.33	2.83	2.83	-2.38	37.32	0.39	0.01
129	16.47	2.83	2.83	-1.85	29.04	0.31	0.02
130	16.60	2.83	2.83	1.30	12.73	0.13	-0.03
131	16.70	2.83	2.83	8.64	0.61	0.09	-0.04
132	16.83	2.83	2.83	28.17	-1.80	0.30	-0.03
133	16.97	2.83	2.83	40.09	-2.56	0.42	-0.02
134	17.10	2.83	2.83	43.69	-2.79	0.46	-0.01
135	17.23	2.83	2.83	40.09	-2.56	0.42	0.02
136	17.37	2.83	2.83	28.17	-1.80	0.30	0.03
137	17.50	2.83	2.83	8.64	0.61	0.09	0.04
138	17.60	2.83	2.83	1.30	12.73	0.13	0.03
139	17.73	2.83	2.83	-1.85	29.04	0.31	-0.02
140	17.87	2.83	2.83	-2.38	37.32	0.39	-0.01
141	18.00	2.83	2.83	-2.54	39.76	0.42	-0.01
142	18.13	2.83	2.83	-2.38	37.32	0.39	0.01
143	18.27	2.83	2.83	-1.85	29.04	0.31	0.02
144	18.40	2.83	2.83	1.30	12.73	0.13	-0.03
145	18.50	2.83	2.83	8.64	0.61	0.09	-0.04
146	18.63	2.83	2.83	28.17	-1.80	0.30	-0.03
147	18.77	2.83	2.83	40.09	-2.56	0.42	-0.02
148	18.90	2.83	2.83	43.69	-2.79	0.46	-0.01
149	19.03	2.83	2.83	40.09	-2.56	0.42	0.02
150	19.17	2.83	2.83	28.17	-1.80	0.30	0.03
151	19.30	2.83	2.83	8.64	0.61	0.09	0.04
152	19.40	2.83	2.83	1.30	12.73	0.13	0.03
153	19.53	2.83	2.83	-1.85	29.04	0.31	-0.02
154	19.67	2.83	2.83	-2.38	37.32	0.39	-0.01
155	19.80	2.83	2.83	-2.54	39.75	0.42	-0.01
156	19.93	2.83	2.83	-2.38	37.32	0.39	0.01
157	20.07	2.83	2.83	-1.85	29.04	0.31	0.02

158	20.20	2.83	2.83	1.30	12.73	0.13	-0.03
159	20.30	2.83	2.83	8.64	0.61	0.09	-0.04
160	20.43	2.83	2.83	28.17	-1.80	0.30	-0.03
161	20.57	2.83	2.83	40.09	-2.56	0.42	-0.02
162	20.70	2.83	2.83	43.69	-2.79	0.46	-0.01
163	20.83	2.83	2.83	40.09	-2.56	0.42	0.02
164	20.97	2.83	2.83	28.17	-1.80	0.30	0.03
165	21.10	2.83	2.83	8.64	0.61	0.09	0.04
166	21.20	2.83	2.83	1.30	12.73	0.13	0.03
167	21.33	2.83	2.83	-1.85	29.04	0.31	-0.02
168	21.47	2.83	2.83	-2.38	37.32	0.39	-0.01
169	21.60	2.83	2.83	-2.53	39.75	0.42	-0.01
170	21.73	2.83	2.83	-2.38	37.32	0.39	0.01
171	21.87	2.83	2.83	-1.85	29.04	0.31	0.02
172	22.00	2.83	2.83	1.30	12.73	0.13	-0.03
173	22.10	2.83	2.83	8.65	0.61	0.09	-0.04
174	22.23	2.83	2.83	28.18	-1.80	0.30	-0.03
175	22.37	2.83	2.83	40.09	-2.56	0.42	-0.02
176	22.50	2.83	2.83	43.70	-2.79	0.46	-0.01
177	22.63	2.83	2.83	40.09	-2.56	0.42	0.02
178	22.77	2.83	2.83	28.18	-1.80	0.30	0.03
179	22.90	2.83	2.83	8.65	0.61	0.09	0.04
180	23.00	2.83	2.83	1.30	12.73	0.13	0.03
181	23.13	2.83	2.83	-1.85	29.03	0.31	-0.02
182	23.27	2.83	2.83	-2.38	37.31	0.39	-0.01
183	23.40	2.83	2.83	-2.53	39.74	0.42	-0.01
184	23.53	2.83	2.83	-2.38	37.30	0.39	0.01
185	23.67	2.83	2.83	-1.85	29.02	0.30	0.02
186	23.80	2.83	2.83	1.30	12.71	0.13	-0.03
187	23.90	2.83	2.83	8.67	0.61	0.09	-0.04
188	24.03	2.83	2.83	28.21	-1.80	0.30	-0.03
189	24.17	2.83	2.83	40.13	-2.56	0.42	-0.02
190	24.30	2.83	2.83	43.74	-2.79	0.46	-0.01
191	24.43	2.83	2.83	40.14	-2.56	0.42	0.02
192	24.57	2.83	2.83	28.25	-1.80	0.30	0.03
193	24.70	2.83	2.83	8.73	0.61	0.09	0.04
194	24.80	2.83	2.83	1.30	12.64	0.13	0.03
195	24.93	2.83	2.83	-1.84	28.92	0.30	-0.02
196	25.07	2.83	2.83	-2.37	37.17	0.39	-0.01
197	25.20	2.83	2.83	-2.52	39.58	0.42	-0.01
198	25.33	2.83	2.83	-2.37	37.11	0.39	0.01
199	25.47	2.83	2.83	-1.84	28.78	0.30	0.02
200	25.60	2.83	2.83	1.30	12.46	0.13	-0.03
201	25.70	2.83	2.83	9.02	0.61	0.09	-0.04
202	25.83	2.83	2.83	28.62	-1.83	0.30	-0.03
203	25.97	2.83	2.83	40.63	-2.59	0.43	-0.02
204	26.10	2.83	2.83	44.35	-2.83	0.47	-0.01
205	26.23	2.83	2.83	40.86	-2.61	0.43	0.02
206	26.37	2.83	2.83	29.11	-1.86	0.31	0.03
207	26.50	2.83	2.83	9.81	-0.63	0.10	0.04
208	26.60	2.83	2.83	1.30	11.57	0.12	0.03
209	26.73	2.83	2.83	-1.75	27.40	0.29	-0.02
210	26.87	2.83	2.83	-2.25	35.33	0.37	-0.01
211	27.00	2.83	2.83	-2.39	37.40	0.39	-0.01
212	27.13	2.83	2.83	-2.20	34.45	0.36	-0.01
213	27.27	2.83	2.83	-1.63	25.52	0.27	-0.02
214	27.40	2.83	2.83	1.31	9.04	0.10	-0.04
215	27.50	2.83	2.83	13.85	-0.88	0.15	-0.05
216	27.63	2.83	2.83	34.36	-2.19	0.36	-0.04
217	27.77	2.83	2.83	47.55	-3.03	0.50	-0.02
218	27.90	2.83	2.83	52.69	-3.36	0.55	-0.01
219	28.03	2.83	2.83	50.71	-3.23	0.53	-0.02
220	28.17	2.83	2.83	40.86	-2.61	0.43	-0.03
221	28.30	2.83	2.83	23.75	-1.51	0.25	-0.04
222	28.40	2.83	2.83	6.99	3.65	0.07	-0.04
223	28.53	2.83	2.83	-0.69	10.81	0.11	-0.04
224	28.67	2.83	2.83	-1.16	18.16	0.19	-0.03
225	28.80	2.83	2.83	-1.35	21.18	0.22	-0.02
226	28.93	2.83	2.83	-1.38	21.60	0.23	-0.02
227	29.07	2.83	2.83	-1.31	20.61	0.22	-0.01
228	29.20	2.83	2.83	-1.21	19.02	0.20	-0.01
229	29.33	2.83	2.83	-1.11	17.37	0.18	-0.01
230	29.47	2.83	2.83	-1.01	15.88	0.17	-0.01
231	29.60	2.83	2.83	-0.94	14.66	0.15	0.00
232	29.73	2.83	2.83	-0.87	13.66	0.14	0.00
233	29.87	2.83	2.83	1.42	13.02	0.14	0.01
234	30.00	2.83	2.83	-0.56	8.79	0.09	0.01

Piastra fondazione valle

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	779.00	-49.67	8.19	-0.21
2	0.13	2.83	2.83	727.68	-46.40	7.65	-0.34
3	0.27	2.83	2.83	531.70	-33.90	5.59	-0.70
4	0.40	2.83	2.83	103.64	27.92	1.09	0.88
5	0.50	2.83	2.83	-17.65	276.79	2.91	-0.80
6	0.63	2.83	2.83	-33.65	527.68	5.55	-0.59
7	0.77	2.83	2.83	-40.78	639.52	6.72	-0.26
8	0.90	2.83	2.83	-42.47	666.09	7.00	0.12
9	1.03	2.83	2.83	-40.78	639.52	6.72	0.26
10	1.17	2.83	2.83	-33.65	527.68	5.55	0.59
11	1.30	2.83	2.83	-17.65	276.79	2.91	0.80
12	1.40	2.83	2.83	103.64	27.92	1.09	-0.88
13	1.53	2.83	2.83	531.70	-33.90	5.59	0.70
14	1.67	2.83	2.83	727.68	-46.40	7.65	0.34
15	1.80	2.83	2.83	779.00	-49.67	8.19	0.16
16	1.93	2.83	2.83	727.68	-46.40	7.65	-0.34
17	2.07	2.83	2.83	531.70	-33.90	5.59	-0.70
18	2.20	2.83	2.83	103.64	27.92	1.09	0.88
19	2.30	2.83	2.83	-17.65	276.79	2.91	-0.80
20	2.43	2.83	2.83	-33.65	527.68	5.55	-0.59
21	2.57	2.83	2.83	-40.78	639.52	6.72	-0.26
22	2.70	2.83	2.83	-42.47	666.09	7.00	0.12
23	2.83	2.83	2.83	-40.78	639.52	6.72	0.26
24	2.97	2.83	2.83	-33.65	527.68	5.55	0.59
25	3.10	2.83	2.83	-17.65	276.79	2.91	0.80
26	3.20	2.83	2.83	103.64	27.92	1.09	-0.88
27	3.33	2.83	2.83	531.70	-33.90	5.59	0.70
28	3.47	2.83	2.83	727.68	-46.40	7.65	0.34
29	3.60	2.83	2.83	779.00	-49.67	8.19	0.16
30	3.73	2.83	2.83	727.68	-46.40	7.65	-0.34
31	3.87	2.83	2.83	531.70	-33.90	5.59	-0.70
32	4.00	2.83	2.83	103.64	27.92	1.09	0.88
33	4.10	2.83	2.83	-17.65	276.79	2.91	-0.80
34	4.23	2.83	2.83	-33.65	527.68	5.55	-0.59
35	4.37	2.83	2.83	-40.78	639.52	6.72	-0.26
36	4.50	2.83	2.83	-42.47	666.09	7.00	-0.12
37	4.63	2.83	2.83	-40.78	639.52	6.72	0.26
38	4.77	2.83	2.83	-33.65	527.68	5.55	0.59
39	4.90	2.83	2.83	-17.65	276.79	2.91	0.80
40	5.00	2.83	2.83	103.64	27.92	1.09	-0.88
41	5.13	2.83	2.83	531.70	-33.90	5.59	0.70
42	5.27	2.83	2.83	727.68	-46.40	7.65	0.34
43	5.40	2.83	2.83	779.00	-49.67	8.19	-0.16
44	5.53	2.83	2.83	727.68	-46.40	7.65	-0.34
45	5.67	2.83	2.83	531.70	-33.90	5.59	-0.70
46	5.80	2.83	2.83	103.64	27.92	1.09	0.88
47	5.90	2.83	2.83	-17.65	276.79	2.91	-0.80
48	6.03	2.83	2.83	-33.65	527.68	5.55	-0.59
49	6.17	2.83	2.83	-40.78	639.52	6.72	-0.26
50	6.30	2.83	2.83	-42.47	666.09	7.00	-0.12
51	6.43	2.83	2.83	-40.78	639.52	6.72	0.26
52	6.57	2.83	2.83	-33.65	527.68	5.55	0.59
53	6.70	2.83	2.83	-17.65	276.79	2.91	0.80
54	6.80	2.83	2.83	103.64	27.92	1.09	-0.88
55	6.93	2.83	2.83	531.70	-33.90	5.59	0.70
56	7.07	2.83	2.83	727.68	-46.40	7.65	0.34
57	7.20	2.83	2.83	779.00	-49.67	8.19	-0.16
58	7.33	2.83	2.83	727.68	-46.40	7.65	-0.34
59	7.47	2.83	2.83	531.70	-33.90	5.59	-0.70
60	7.60	2.83	2.83	103.64	27.92	1.09	0.88
61	7.70	2.83	2.83	-17.65	276.79	2.91	-0.80
62	7.83	2.83	2.83	-33.65	527.68	5.55	-0.59
63	7.97	2.83	2.83	-40.78	639.52	6.72	-0.26
64	8.10	2.83	2.83	-42.47	666.09	7.00	0.12
65	8.23	2.83	2.83	-40.78	639.52	6.72	0.26
66	8.37	2.83	2.83	-33.65	527.68	5.55	0.59
67	8.50	2.83	2.83	-17.65	276.79	2.91	0.80
68	8.60	2.83	2.83	103.64	27.92	1.09	-0.88
69	8.73	2.83	2.83	531.70	-33.90	5.59	0.70
70	8.87	2.83	2.83	727.68	-46.40	7.65	0.34
71	9.00	2.83	2.83	779.00	-49.67	8.19	0.16
72	9.13	2.83	2.83	727.68	-46.40	7.65	-0.34
73	9.27	2.83	2.83	531.70	-33.90	5.59	-0.70

74	9.40	2.83	2.83	103.64	27.92	1.09	0.88
75	9.50	2.83	2.83	-17.65	276.79	2.91	-0.80
76	9.63	2.83	2.83	-33.65	527.68	5.55	-0.59
77	9.77	2.83	2.83	-40.78	639.52	6.72	-0.26
78	9.90	2.83	2.83	-42.47	666.09	7.00	-0.12
79	10.03	2.83	2.83	-40.78	639.52	6.72	0.26
80	10.17	2.83	2.83	-33.65	527.68	5.55	0.59
81	10.30	2.83	2.83	-17.65	276.79	2.91	0.80
82	10.40	2.83	2.83	103.64	27.92	1.09	-0.88
83	10.53	2.83	2.83	531.70	-33.90	5.59	0.70
84	10.67	2.83	2.83	727.68	-46.40	7.65	0.34
85	10.80	2.83	2.83	779.00	-49.67	8.19	0.16
86	10.93	2.83	2.83	727.68	-46.40	7.65	-0.34
87	11.07	2.83	2.83	531.70	-33.90	5.59	-0.70
88	11.20	2.83	2.83	103.64	27.92	1.09	0.88
89	11.30	2.83	2.83	-17.65	276.79	2.91	-0.80
90	11.43	2.83	2.83	-33.65	527.68	5.55	-0.59
91	11.57	2.83	2.83	-40.78	639.52	6.72	-0.26
92	11.70	2.83	2.83	-42.47	666.09	7.00	0.12
93	11.83	2.83	2.83	-40.78	639.52	6.72	0.26
94	11.97	2.83	2.83	-33.65	527.68	5.55	0.59
95	12.10	2.83	2.83	-17.65	276.79	2.91	0.80
96	12.20	2.83	2.83	103.64	27.92	1.09	-0.88
97	12.33	2.83	2.83	531.70	-33.90	5.59	0.70
98	12.47	2.83	2.83	727.68	-46.40	7.65	0.34
99	12.60	2.83	2.83	779.00	-49.67	8.19	-0.16
100	12.73	2.83	2.83	727.68	-46.40	7.65	-0.34
101	12.87	2.83	2.83	531.70	-33.90	5.59	-0.70
102	13.00	2.83	2.83	103.64	27.92	1.09	0.88
103	13.10	2.83	2.83	-17.65	276.79	2.91	-0.80
104	13.23	2.83	2.83	-33.65	527.68	5.55	-0.59
105	13.37	2.83	2.83	-40.78	639.52	6.72	-0.26
106	13.50	2.83	2.83	-42.47	666.09	7.00	-0.12
107	13.63	2.83	2.83	-40.78	639.52	6.72	0.26
108	13.77	2.83	2.83	-33.65	527.68	5.55	0.59
109	13.90	2.83	2.83	-17.65	276.79	2.91	0.80
110	14.00	2.83	2.83	103.64	27.92	1.09	-0.88
111	14.13	2.83	2.83	531.70	-33.90	5.59	0.70
112	14.27	2.83	2.83	727.68	-46.40	7.65	0.34
113	14.40	2.83	2.83	779.00	-49.67	8.19	-0.16
114	14.53	2.83	2.83	727.68	-46.40	7.65	-0.34
115	14.67	2.83	2.83	531.70	-33.90	5.59	-0.70
116	14.80	2.83	2.83	103.64	27.92	1.09	0.88
117	14.90	2.83	2.83	-17.65	276.79	2.91	-0.80
118	15.03	2.83	2.83	-33.65	527.68	5.55	-0.59
119	15.17	2.83	2.83	-40.78	639.52	6.72	-0.26
120	15.30	2.83	2.83	-42.47	666.09	7.00	-0.12
121	15.43	2.83	2.83	-40.78	639.52	6.72	0.26
122	15.57	2.83	2.83	-33.65	527.68	5.55	0.59
123	15.70	2.83	2.83	-17.65	276.79	2.91	0.80
124	15.80	2.83	2.83	103.64	27.92	1.09	-0.88
125	15.93	2.83	2.83	531.70	-33.90	5.59	0.70
126	16.07	2.83	2.83	727.68	-46.40	7.65	0.34
127	16.20	2.83	2.83	779.00	-49.67	8.19	-0.16
128	16.33	2.83	2.83	727.68	-46.40	7.65	-0.34
129	16.47	2.83	2.83	531.70	-33.90	5.59	-0.70
130	16.60	2.83	2.83	103.64	27.92	1.09	0.88
131	16.70	2.83	2.83	-17.65	276.79	2.91	-0.80
132	16.83	2.83	2.83	-33.65	527.68	5.55	-0.59
133	16.97	2.83	2.83	-40.78	639.52	6.72	-0.26
134	17.10	2.83	2.83	-42.47	666.09	7.00	-0.12
135	17.23	2.83	2.83	-40.78	639.52	6.72	0.26
136	17.37	2.83	2.83	-33.65	527.68	5.55	0.59
137	17.50	2.83	2.83	-17.65	276.79	2.91	0.80
138	17.60	2.83	2.83	103.64	27.92	1.09	-0.88
139	17.73	2.83	2.83	531.70	-33.90	5.59	0.70
140	17.87	2.83	2.83	727.68	-46.40	7.65	0.34
141	18.00	2.83	2.83	779.00	-49.67	8.19	-0.16
142	18.13	2.83	2.83	727.68	-46.40	7.65	-0.34
143	18.27	2.83	2.83	531.70	-33.90	5.59	-0.70
144	18.40	2.83	2.83	103.64	27.92	1.09	0.88
145	18.50	2.83	2.83	-17.65	276.79	2.91	-0.80
146	18.63	2.83	2.83	-33.65	527.68	5.55	-0.59
147	18.77	2.83	2.83	-40.78	639.52	6.72	-0.26
148	18.90	2.83	2.83	-42.47	666.09	7.00	-0.12
149	19.03	2.83	2.83	-40.78	639.52	6.72	0.26
150	19.17	2.83	2.83	-33.65	527.68	5.55	0.59

151	19.30	2.83	2.83	-17.65	276.79	2.91	0.80
152	19.40	2.83	2.83	103.64	27.92	1.09	-0.88
153	19.53	2.83	2.83	531.70	-33.90	5.59	0.70
154	19.67	2.83	2.83	727.68	-46.40	7.65	0.34
155	19.80	2.83	2.83	779.00	-49.67	8.19	-0.16
156	19.93	2.83	2.83	727.68	-46.40	7.65	-0.34
157	20.07	2.83	2.83	531.70	-33.90	5.59	-0.70
158	20.20	2.83	2.83	103.64	27.92	1.09	0.88
159	20.30	2.83	2.83	-17.65	276.79	2.91	-0.80
160	20.43	2.83	2.83	-33.65	527.68	5.55	-0.59
161	20.57	2.83	2.83	-40.78	639.52	6.72	-0.26
162	20.70	2.83	2.83	-42.47	666.09	7.00	-0.12
163	20.83	2.83	2.83	-40.78	639.52	6.72	0.26
164	20.97	2.83	2.83	-33.65	527.68	5.55	0.59
165	21.10	2.83	2.83	-17.65	276.79	2.91	0.80
166	21.20	2.83	2.83	103.64	27.92	1.09	-0.88
167	21.33	2.83	2.83	531.70	-33.90	5.59	0.70
168	21.47	2.83	2.83	727.68	-46.40	7.65	0.34
169	21.60	2.83	2.83	779.00	-49.67	8.19	-0.16
170	21.73	2.83	2.83	727.68	-46.40	7.65	-0.34
171	21.87	2.83	2.83	531.70	-33.90	5.59	-0.70
172	22.00	2.83	2.83	103.64	27.92	1.09	0.88
173	22.10	2.83	2.83	-17.65	276.79	2.91	-0.80
174	22.23	2.83	2.83	-33.65	527.68	5.55	-0.59
175	22.37	2.83	2.83	-40.78	639.52	6.72	-0.26
176	22.50	2.83	2.83	-42.47	666.09	7.00	-0.12
177	22.63	2.83	2.83	-40.78	639.52	6.72	0.26
178	22.77	2.83	2.83	-33.65	527.68	5.55	0.59
179	22.90	2.83	2.83	-17.65	276.79	2.91	0.80
180	23.00	2.83	2.83	103.64	27.92	1.09	-0.88
181	23.13	2.83	2.83	531.70	-33.90	5.59	0.70
182	23.27	2.83	2.83	727.68	-46.40	7.65	0.34
183	23.40	2.83	2.83	779.00	-49.67	8.19	-0.16
184	23.53	2.83	2.83	727.68	-46.40	7.65	-0.34
185	23.67	2.83	2.83	531.70	-33.90	5.59	-0.70
186	23.80	2.83	2.83	103.64	27.92	1.09	0.88
187	23.90	2.83	2.83	-17.65	276.79	2.91	-0.80
188	24.03	2.83	2.83	-33.65	527.67	5.55	-0.59
189	24.17	2.83	2.83	-40.78	639.51	6.72	-0.26
190	24.30	2.83	2.83	-42.47	666.08	7.00	-0.12
191	24.43	2.83	2.83	-40.78	639.51	6.72	0.26
192	24.57	2.83	2.83	-33.65	527.66	5.54	0.59
193	24.70	2.83	2.83	-17.65	276.77	2.91	0.80
194	24.80	2.83	2.83	103.66	27.92	1.09	-0.88
195	24.93	2.83	2.83	531.73	-33.91	5.59	0.70
196	25.07	2.83	2.83	727.72	-46.40	7.65	0.34
197	25.20	2.83	2.83	779.05	-49.68	8.19	-0.16
198	25.33	2.83	2.83	727.74	-46.41	7.65	-0.34
199	25.47	2.83	2.83	531.78	-33.91	5.59	-0.70
200	25.60	2.83	2.83	103.73	27.92	1.09	0.88
201	25.70	2.83	2.83	-17.64	276.66	2.91	-0.80
202	25.83	2.83	2.83	-33.64	527.51	5.54	-0.59
203	25.97	2.83	2.83	-40.77	639.31	6.72	-0.26
204	26.10	2.83	2.83	-42.46	665.83	7.00	-0.12
205	26.23	2.83	2.83	-40.76	639.19	6.72	0.26
206	26.37	2.83	2.83	-33.62	527.24	5.54	0.58
207	26.50	2.83	2.83	-17.61	276.21	2.90	0.80
208	26.60	2.83	2.83	104.21	27.92	1.10	-0.88
209	26.73	2.83	2.83	532.61	-33.96	5.60	0.70
210	26.87	2.83	2.83	728.84	-46.48	7.66	0.34
211	27.00	2.83	2.83	780.50	-49.77	8.20	-0.16
212	27.13	2.83	2.83	729.52	-46.52	7.67	-0.34
213	27.27	2.83	2.83	534.09	-34.06	5.61	-0.70
214	27.40	2.83	2.83	106.24	27.90	1.12	0.88
215	27.50	2.83	2.83	-17.39	272.78	2.87	-0.80
216	27.63	2.83	2.83	-33.33	522.67	5.49	-0.59
217	27.77	2.83	2.83	-40.37	633.11	6.65	-0.27
218	27.90	2.83	2.83	-41.97	658.25	6.92	-0.12
219	28.03	2.83	2.83	-40.13	629.38	6.61	0.29
220	28.17	2.83	2.83	-32.80	514.38	5.41	0.57
221	28.30	2.83	2.83	-16.51	258.94	2.72	0.78
222	28.40	2.83	2.83	121.41	27.83	1.28	-0.91
223	28.53	2.83	2.83	560.65	-35.75	5.89	0.67
224	28.67	2.83	2.83	765.64	-48.82	8.05	0.30
225	28.80	2.83	2.83	829.38	-52.89	8.72	-0.18
226	28.93	2.83	2.83	791.80	-50.49	8.32	-0.34
227	29.07	2.83	2.83	618.44	-39.44	6.50	-0.78

228	29.20	2.83	2.83	219.16	24.15	2.30	-0.91
229	29.33	2.83	2.83	-12.44	195.02	2.05	-0.82
230	29.47	2.83	2.83	-22.66	355.39	3.73	-0.61
231	29.60	2.83	2.83	-24.64	386.35	4.06	-0.38
232	29.73	2.83	2.83	-21.86	342.85	3.60	-0.33
233	29.87	2.83	2.83	18.83	271.40	2.85	-0.32
234	30.00	2.83	2.83	29.02	5.54	0.30	-0.31

Verifiche a fessurazione

Combinazione n° 20

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

A_{fs} area di armatura in corrispondenza del lembo di monte in [cmq]
A_{fi} area di armatura in corrispondenza del lembo di valle in [cmq]

M_{pr} Momento di prima fessurazione espressa in [kgm]

M Momento agente nella sezione espressa in [kgm]

ε_m deformazione media espressa in [%]

s_m Distanza media tra le fessure espressa in [mm]

w Apertura media della fessura espressa in [mm]

Verifica fessurazione paramento

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	0.00	10.05	8.04	-2448	0	0.0000	0.00	0.000
2	0.13	10.05	8.04	-2552	-3	0.0000	0.00	0.000
3	0.25	10.05	8.04	-2659	-11	0.0000	0.00	0.000
4	0.38	10.05	8.04	-2767	-28	0.0000	0.00	0.000
5	0.50	10.05	8.04	-2878	-54	0.0000	0.00	0.000
6	0.63	14.07	8.04	-3106	-91	0.0000	0.00	0.000
7	0.75	14.07	8.04	-3224	-145	0.0000	0.00	0.000
8	0.88	14.07	8.04	-3344	-221	0.0000	0.00	0.000
9	1.00	14.07	8.04	-3466	-319	0.0000	0.00	0.000
10	1.13	14.07	8.04	-3590	-444	0.0000	0.00	0.000
11	1.25	14.07	8.04	-3716	-597	0.0000	0.00	0.000
12	1.38	14.07	8.04	-3844	-780	0.0000	0.00	0.000
13	1.50	14.07	8.04	-3974	-995	0.0000	0.00	0.000
14	1.63	14.07	8.04	-4106	-1244	0.0000	0.00	0.000
15	1.75	14.07	8.04	-4241	-1529	0.0000	0.00	0.000
16	1.88	14.07	8.04	-4377	-1851	0.0000	0.00	0.000
17	2.00	28.15	16.08	-5101	-2212	0.0000	0.00	0.000
18	2.13	14.07	8.04	-4656	-2615	0.0000	0.00	0.000
19	2.25	14.07	8.04	-4798	-3060	0.0000	0.00	0.000
20	2.38	14.07	8.04	-4943	-3550	0.0000	0.00	0.000
21	2.50	14.07	8.04	-5090	-4085	0.0000	0.00	0.000

Verifica fessurazione fondazione

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	-1.06	8.04	8.04	-4193	-13	0.0000	0.00	0.000
2	-0.99	8.04	8.04	4193	182	0.0000	0.00	0.000
3	-0.93	8.04	8.04	4193	294	0.0000	0.00	0.000
4	-0.86	8.04	8.04	4193	455	0.0000	0.00	0.000
5	-0.79	8.04	8.04	4193	643	0.0000	0.00	0.000
6	-0.73	8.04	8.04	4193	842	0.0000	0.00	0.000
7	-0.66	8.04	8.04	4193	1116	0.0000	0.00	0.000
8	-0.60	8.04	8.04	4193	1639	0.0000	0.00	0.000
9	-0.55	8.04	8.04	4193	2289	0.0000	0.00	0.000
10	-0.49	8.04	8.04	4193	3089	0.0000	0.00	0.000
11	-0.43	8.04	10.05	4267	4061	0.0000	0.00	0.000
12	0.00	8.04	8.04	-4193	-2056	0.0000	0.00	0.000
13	0.04	8.04	8.04	-4193	-1860	0.0000	0.00	0.000
14	0.11	8.04	8.04	-4193	-1559	0.0000	0.00	0.000
15	0.17	8.04	8.04	-4193	-1286	0.0000	0.00	0.000
16	0.24	8.04	8.04	-4193	-1039	0.0000	0.00	0.000
17	0.31	8.04	8.04	-4193	-818	0.0000	0.00	0.000
18	0.37	8.04	8.04	-4193	-623	0.0000	0.00	0.000
19	0.44	8.04	8.04	-4193	-455	0.0000	0.00	0.000
20	0.51	8.04	8.04	-4193	-313	0.0000	0.00	0.000
21	0.57	8.04	8.04	-4193	-204	0.0000	0.00	0.000
22	0.64	8.04	8.04	-4193	-118	0.0000	0.00	0.000
23	0.71	8.04	8.04	-4193	-55	0.0000	0.00	0.000
24	0.77	8.04	8.04	-4193	-16	0.0000	0.00	0.000
25	0.84	8.04	8.04	4193	2	0.0000	0.00	0.000

Analisi dei pali

Combinazione n° 20

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	6945.0
Verticale	[kg]	9502.5
Momento	[kgm]	-4752.7

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.22104
Verticale	[cm]	0.00483
Rotazione	[°]	-0.00457

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]
1	32	799	6411	0
2	33	16502	6411	0

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 20

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
A _f	area di armatura espressa in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
σ _f	tensione nell'acciaio espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{stf}	tensione nelle staffe espressa in [kg/cmq]

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _f	σ _c	σ _f
1	0.00	0	799	6411	52.28	0.14	2.06
2	0.23	-1442	1081	6373	52.28	4.39	109.91
3	0.45	-2876	1359	6338	52.28	8.80	236.17
4	0.68	-4302	1636	6306	52.28	13.17	361.85
5	0.90	-5721	1909	5181	52.28	17.52	486.96
6	1.13	-6887	2179	4159	52.28	21.09	588.77
7	1.35	-7823	2447	3233	52.28	23.96	669.38
8	1.57	-8550	2711	2401	52.28	26.19	730.83
9	1.80	-9091	2973	1658	52.28	27.84	775.04
10	2.02	-9464	3232	999	52.28	28.98	803.88
11	2.25	-9688	3488	418	52.28	29.66	819.07
12	2.48	-9782	3742	-90	52.28	29.95	822.25
13	2.70	-9762	3992	-530	52.28	29.88	814.95
14	2.93	-9643	4240	-908	52.28	29.50	798.58
15	3.15	-9438	4485	-1228	52.28	28.87	774.44
16	3.38	-9162	4727	-1497	52.28	28.01	743.72
17	3.60	-8825	4966	-1718	52.28	26.96	707.52
18	3.83	-8439	5203	-1898	52.28	25.76	666.80
19	4.05	-8012	5437	-2040	52.28	24.44	622.47
20	4.28	-7553	5667	-2149	52.28	23.01	575.30
21	4.50	-7069	5895	-2229	52.28	21.51	526.01
22	4.73	-6568	6121	-2284	52.28	19.94	475.21
23	4.95	-6054	6343	-2318	52.28	18.34	423.46
24	5.17	-5532	6563	-2333	52.28	16.70	371.26
25	5.40	-5007	6779	-2334	52.28	15.05	319.04
26	5.63	-4482	6993	-2323	52.28	13.39	267.24
27	5.85	-3960	7205	-2301	52.28	11.73	216.31
28	6.08	-3442	7413	-2272	52.28	10.08	166.80
29	6.30	-2931	7687	-2117	52.28	8.43	118.43
30	6.53	-2454	7970	-1943	52.28	6.90	84.08
31	6.75	-2017	8253	-1757	52.28	5.55	69.64
32	6.98	-1622	8535	-1564	52.28	4.46	57.63
33	7.20	-1270	8818	-1367	52.28	3.68	48.76
34	7.42	-962	9101	-1170	52.28	3.16	42.72
35	7.65	-699	9384	-976	52.28	2.77	38.19

36	7.88	-480	9666	-785	52.28	2.46	34.54
37	8.10	-303	9949	-600	52.28	2.21	31.74
38	8.33	-168	10232	-420	52.28	2.04	29.77
39	8.55	-74	10515	-247	52.28	1.93	28.61
40	8.78	-18	10797	-80	52.28	1.89	28.23
41	9.00	0	11080	-80	52.28	1.91	28.60

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	σ _c	σ _r
1	0.00	0	16502	6411	52.28	2.84	42.60
2	0.23	-1442	16782	6373	52.28	5.28	72.15
3	0.45	-2876	17056	6338	52.28	8.02	104.98
4	0.68	-4302	17323	6306	52.28	11.84	148.40
5	0.90	-5721	17584	5181	52.28	16.18	195.79
6	1.13	-6887	17838	4159	52.28	19.84	282.04
7	1.35	-7823	18086	3233	52.28	22.77	357.22
8	1.57	-8550	18327	2401	52.28	25.05	415.94
9	1.80	-9091	18562	1658	52.28	26.73	458.97
10	2.02	-9464	18790	999	52.28	27.88	487.61
11	2.25	-9688	19012	418	52.28	28.57	503.34
12	2.48	-9782	19227	-90	52.28	28.84	507.65
13	2.70	-9762	19436	-530	52.28	28.76	502.00
14	2.93	-9643	19639	-908	52.28	28.36	487.78
15	3.15	-9438	19835	-1228	52.28	27.69	466.31
16	3.38	-9162	20024	-1497	52.28	26.80	438.81
17	3.60	-8825	20207	-1718	52.28	25.71	406.44
18	3.83	-8439	20383	-1898	52.28	24.47	370.28
19	4.05	-8012	20554	-2040	52.28	23.10	331.36
20	4.28	-7553	20717	-2149	52.28	21.62	290.65
21	4.50	-7069	20874	-2229	52.28	20.08	249.14
22	4.73	-6568	21025	-2284	52.28	18.49	224.92
23	4.95	-6054	21169	-2318	52.28	16.88	207.72
24	5.17	-5532	21307	-2333	52.28	15.28	190.43
25	5.40	-5007	21438	-2334	52.28	13.73	173.40
26	5.63	-4482	21563	-2323	52.28	12.26	157.04
27	5.85	-3960	21681	-2301	52.28	10.92	141.80
28	6.08	-3442	21793	-2272	52.28	9.72	128.02
29	6.30	-2931	22056	-2117	52.28	8.71	116.24
30	6.53	-2454	22339	-1943	52.28	7.91	106.73
31	6.75	-2017	22622	-1757	52.28	7.23	98.70
32	6.98	-1622	22905	-1564	52.28	6.63	91.53
33	7.20	-1270	23187	-1367	52.28	6.09	85.23
34	7.42	-962	23470	-1170	52.28	5.63	79.82
35	7.65	-699	23753	-976	52.28	5.24	75.29
36	7.88	-480	24036	-785	52.28	4.93	71.63
37	8.10	-303	24318	-600	52.28	4.69	68.83
38	8.33	-168	24601	-420	52.28	4.51	66.86
39	8.55	-74	24884	-247	52.28	4.40	65.71
40	8.78	-18	25166	-80	52.28	4.36	65.33
41	9.00	0	25449	-80	52.28	4.38	65.70

COMBINAZIONE n° 21

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	1189.06	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	44.49	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	343.73	[kg]		
Inerzia verticale del muro	171.86	[kg]		
Inerzia del terrapieno fondazione di monte	336.30	[kg]		
Inerzia verticale del terrapieno fondazione di monte	168.15	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	7392.36	[kg]
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Risultante dei carichi applicati in dir. verticale	10294.04	[kg]
Sforzo normale sul piano di posa della fondazione	10294.04	[kg]
Sforzo tangenziale sul piano di posa della fondazione	7392.36	[kg]
Eccentricità rispetto al baricentro della fondazione	0.50	[m]
Lunghezza fondazione reagente	1.36	[m]
Risultante in fondazione	12673.37	[kg]
Inclinazione della risultante (rispetto alla normale)	35.68	[°]
Momento rispetto al baricentro della fondazione	5130.82	[kgm]

Sollecitazioni paramento

Combinazione n° 21

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	3.50	60.52
3	0.25	191.59	15.03	133.67
4	0.38	290.45	36.18	219.43
5	0.50	391.36	68.52	318.17
6	0.63	494.32	114.37	446.05
7	0.75	599.32	178.71	618.45
8	0.88	706.36	266.01	815.89
9	1.00	815.45	378.83	1032.11
10	1.13	926.58	519.42	1265.90
11	1.25	1039.77	689.92	1516.31
12	1.38	1154.99	892.34	1782.65
13	1.50	1272.26	1128.64	2064.35
14	1.63	1391.58	1400.71	2360.98
15	1.75	1512.94	1710.37	2672.16
16	1.88	1636.35	2059.42	2997.62
17	2.00	1761.80	2449.62	3337.12
18	2.13	1889.30	2882.72	3690.45
19	2.25	2018.84	3360.41	4057.46
20	2.38	2150.43	3884.41	4438.02
21	2.50	2284.06	4456.30	4829.89

Involuppo sollecitazioni piastra di fondazione

Combinazione n° 21

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-13.88	2.69	-1048.93	2004.89
2	0.07	-115.91	196.75	0.00	1958.15
3	0.13	-102.52	318.62	0.00	2605.56
4	0.20	0.00	493.99	0.00	4459.73
5	0.27	0.00	698.71	0.00	6318.25
6	0.33	0.00	915.10	0.00	8266.31
7	0.40	0.00	1213.02	0.00	10383.28
8	0.46	0.00	1780.97	-265.18	12579.36
9	0.52	0.00	2486.71	-1044.20	14999.69
10	0.57	0.00	3354.17	-2509.15	17629.40
11	0.63	0.00	4407.85	-2552.18	19552.78
12	1.06	-2054.30	0.00	-5006.46	0.00
13	1.10	-1857.55	0.00	-4771.60	0.00
14	1.17	-1557.43	0.00	-4335.77	0.00
15	1.23	-1284.25	0.00	-3927.84	0.00
16	1.30	-1037.07	0.00	-3528.34	0.00
17	1.37	-816.11	0.00	-3130.40	0.00
18	1.43	-621.48	0.00	-2733.61	0.00
19	1.50	-453.21	0.00	-2337.70	0.00
20	1.57	-311.30	0.00	-1942.55	0.00
21	1.63	-203.39	0.00	-1548.13	0.00
22	1.70	-118.36	0.00	-1154.46	0.00
23	1.77	-56.00	0.00	-761.67	0.00
24	1.83	-16.07	0.00	-419.69	0.00
25	1.90	0.00	2.22	-101.46	30.13

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-839.38	44.36	-928.81	334.13
2	0.13	-784.08	41.64	-2836.41	1902.82
3	0.27	-572.91	32.39	-4646.52	4024.32
4	0.40	-111.68	30.11	-4693.45	5497.31
5	0.50	-9.25	298.29	-4720.29	3779.40
6	0.63	-31.52	568.57	-3532.13	2195.26
7	0.77	-44.83	689.08	-2079.04	1048.88
8	0.90	-48.86	717.71	-698.08	698.08
9	1.03	-44.83	689.08	-1048.88	2079.04
10	1.17	-31.52	568.57	-2195.26	3532.13
11	1.30	-9.25	298.29	-3779.40	4720.29
12	1.40	-111.68	30.11	-5497.31	4693.45
13	1.53	-572.91	32.39	-4024.32	4646.52
14	1.67	-784.08	41.64	-1902.82	2836.41
15	1.80	-839.38	44.36	-928.81	928.81
16	1.93	-784.08	41.64	-2836.41	1902.82
17	2.07	-572.91	32.39	-4646.52	4024.32
18	2.20	-111.68	30.11	-4693.45	5497.31
19	2.30	-9.25	298.29	-4720.29	3779.40
20	2.43	-31.52	568.57	-3532.13	2195.26
21	2.57	-44.83	689.08	-2079.04	1048.88
22	2.70	-48.86	717.71	-698.08	698.08
23	2.83	-44.83	689.08	-1048.88	2079.04
24	2.97	-31.52	568.57	-2195.26	3532.13
25	3.10	-9.25	298.29	-3779.40	4720.29
26	3.20	-111.68	30.11	-5497.31	4693.45
27	3.33	-572.91	32.39	-4024.32	4646.52
28	3.47	-784.08	41.64	-1902.82	2836.41
29	3.60	-839.38	44.36	-928.81	928.81
30	3.73	-784.08	41.64	-2836.41	1902.82
31	3.87	-572.91	32.39	-4646.52	4024.32
32	4.00	-111.68	30.11	-4693.45	5497.31
33	4.10	-9.25	298.29	-4720.29	3779.40

34	4.23	-31.52	568.57	-3532.13	2195.26
35	4.37	-44.83	689.08	-2079.04	1048.88
36	4.50	-48.86	717.71	-698.08	698.08
37	4.63	-44.83	689.08	-1048.88	2079.04
38	4.77	-31.52	568.57	-2195.26	3532.13
39	4.90	-9.25	298.29	-3779.40	4720.29
40	5.00	-111.68	30.11	-5497.31	4693.45
41	5.13	-572.91	32.39	-4024.32	4646.52
42	5.27	-784.08	41.64	-1902.82	2836.41
43	5.40	-839.38	44.36	-928.81	928.81
44	5.53	-784.08	41.64	-2836.41	1902.82
45	5.67	-572.91	32.39	-4646.52	4024.32
46	5.80	-111.68	30.11	-4693.45	5497.31
47	5.90	-9.25	298.29	-4720.29	3779.40
48	6.03	-31.52	568.57	-3532.13	2195.26
49	6.17	-44.83	689.08	-2079.04	1048.88
50	6.30	-48.86	717.71	-698.08	698.08
51	6.43	-44.83	689.08	-1048.88	2079.04
52	6.57	-31.52	568.57	-2195.26	3532.13
53	6.70	-9.25	298.29	-3779.40	4720.29
54	6.80	-111.68	30.11	-5497.31	4693.45
55	6.93	-572.91	32.39	-4024.32	4646.52
56	7.07	-784.08	41.64	-1902.82	2836.41
57	7.20	-839.38	44.36	-928.81	928.81
58	7.33	-784.08	41.64	-2836.41	1902.82
59	7.47	-572.91	32.39	-4646.52	4024.32
60	7.60	-111.68	30.11	-4693.45	5497.31
61	7.70	-9.25	298.29	-4720.29	3779.40
62	7.83	-31.52	568.57	-3532.13	2195.26
63	7.97	-44.83	689.08	-2079.04	1048.88
64	8.10	-48.86	717.71	-698.08	698.08
65	8.23	-44.83	689.08	-1048.88	2079.04
66	8.37	-31.52	568.57	-2195.26	3532.13
67	8.50	-9.25	298.29	-3779.40	4720.29
68	8.60	-111.68	30.11	-5497.31	4693.45
69	8.73	-572.91	32.39	-4024.32	4646.52
70	8.87	-784.08	41.64	-1902.82	2836.41
71	9.00	-839.38	44.36	-928.81	928.81
72	9.13	-784.08	41.64	-2836.41	1902.82
73	9.27	-572.91	32.39	-4646.52	4024.32
74	9.40	-111.68	30.11	-4693.45	5497.31
75	9.50	-9.25	298.29	-4720.29	3779.40
76	9.63	-31.52	568.57	-3532.13	2195.26
77	9.77	-44.83	689.08	-2079.04	1048.88
78	9.90	-48.86	717.71	-698.08	698.08
79	10.03	-44.83	689.08	-1048.88	2079.04
80	10.17	-31.52	568.57	-2195.26	3532.13
81	10.30	-9.25	298.29	-3779.40	4720.29
82	10.40	-111.68	30.11	-5497.31	4693.45
83	10.53	-572.91	32.39	-4024.32	4646.52
84	10.67	-784.08	41.64	-1902.82	2836.41
85	10.80	-839.38	44.36	-928.81	928.81
86	10.93	-784.08	41.64	-2836.41	1902.82
87	11.07	-572.91	32.39	-4646.52	4024.32
88	11.20	-111.68	30.11	-4693.45	5497.31
89	11.30	-9.25	298.29	-4720.29	3779.40
90	11.43	-31.52	568.57	-3532.13	2195.26
91	11.57	-44.83	689.08	-2079.04	1048.88
92	11.70	-48.86	717.71	-698.08	698.08
93	11.83	-44.83	689.08	-1048.88	2079.04
94	11.97	-31.52	568.57	-2195.26	3532.13
95	12.10	-9.25	298.29	-3779.40	4720.29
96	12.20	-111.68	30.11	-5497.31	4693.45
97	12.33	-572.91	32.39	-4024.32	4646.52
98	12.47	-784.08	41.64	-1902.82	2836.41
99	12.60	-839.38	44.36	-928.81	928.81
100	12.73	-784.08	41.64	-2836.41	1902.82
101	12.87	-572.91	32.39	-4646.52	4024.32
102	13.00	-111.68	30.11	-4693.45	5497.31
103	13.10	-9.25	298.29	-4720.29	3779.40
104	13.23	-31.52	568.57	-3532.13	2195.26
105	13.37	-44.83	689.08	-2079.04	1048.88
106	13.50	-48.86	717.71	-698.08	698.08
107	13.63	-44.83	689.08	-1048.88	2079.04
108	13.77	-31.52	568.57	-2195.26	3532.13
109	13.90	-9.25	298.29	-3779.40	4720.29
110	14.00	-111.68	30.11	-5497.31	4693.45

111	14.13	-572.91	32.39	-4024.32	4646.52
112	14.27	-784.08	41.64	-1902.82	2836.41
113	14.40	-839.38	44.36	-928.81	928.81
114	14.53	-784.08	41.64	-2836.41	1902.82
115	14.67	-572.91	32.39	-4646.52	4024.32
116	14.80	-111.68	30.11	-4693.45	5497.31
117	14.90	-9.25	298.29	-4720.29	3779.40
118	15.03	-31.52	568.57	-3532.13	2195.26
119	15.17	-44.83	689.08	-2079.04	1048.88
120	15.30	-48.86	717.71	-698.08	698.08
121	15.43	-44.83	689.08	-1048.88	2079.04
122	15.57	-31.52	568.57	-2195.26	3532.13
123	15.70	-9.25	298.29	-3779.40	4720.29
124	15.80	-111.68	30.11	-5497.31	4693.45
125	15.93	-572.91	32.39	-4024.32	4646.52
126	16.07	-784.08	41.64	-1902.82	2836.41
127	16.20	-839.38	44.36	-928.81	928.81
128	16.33	-784.08	41.64	-2836.41	1902.82
129	16.47	-572.91	32.39	-4646.52	4024.32
130	16.60	-111.68	30.11	-4693.45	5497.31
131	16.70	-9.25	298.29	-4720.29	3779.40
132	16.83	-31.52	568.57	-3532.13	2195.26
133	16.97	-44.83	689.08	-2079.04	1048.88
134	17.10	-48.86	717.71	-698.08	698.08
135	17.23	-44.83	689.08	-1048.88	2079.04
136	17.37	-31.52	568.57	-2195.26	3532.13
137	17.50	-9.25	298.29	-3779.40	4720.29
138	17.60	-111.68	30.11	-5497.31	4693.45
139	17.73	-572.91	32.39	-4024.32	4646.52
140	17.87	-784.08	41.64	-1902.82	2836.41
141	18.00	-839.38	44.36	-928.81	928.81
142	18.13	-784.08	41.64	-2836.41	1902.82
143	18.27	-572.91	32.39	-4646.52	4024.32
144	18.40	-111.68	30.11	-4693.45	5497.31
145	18.50	-9.25	298.29	-4720.29	3779.40
146	18.63	-31.52	568.57	-3532.13	2195.26
147	18.77	-44.83	689.08	-2079.04	1048.88
148	18.90	-48.86	717.71	-698.08	698.08
149	19.03	-44.83	689.08	-1048.88	2079.04
150	19.17	-31.52	568.57	-2195.26	3532.13
151	19.30	-9.25	298.29	-3779.40	4720.29
152	19.40	-111.68	30.11	-5497.31	4693.45
153	19.53	-572.91	32.39	-4024.32	4646.52
154	19.67	-784.08	41.64	-1902.82	2836.41
155	19.80	-839.38	44.36	-928.81	928.81
156	19.93	-784.08	41.64	-2836.41	1902.82
157	20.07	-572.91	32.39	-4646.52	4024.32
158	20.20	-111.68	30.11	-4693.45	5497.31
159	20.30	-9.25	298.29	-4720.29	3779.40
160	20.43	-31.52	568.57	-3532.13	2195.26
161	20.57	-44.83	689.08	-2079.04	1048.88
162	20.70	-48.86	717.71	-698.08	698.08
163	20.83	-44.83	689.08	-1048.88	2079.04
164	20.97	-31.52	568.57	-2195.26	3532.13
165	21.10	-9.25	298.29	-3779.40	4720.29
166	21.20	-111.68	30.11	-5497.31	4693.45
167	21.33	-572.91	32.39	-4024.32	4646.52
168	21.47	-784.08	41.64	-1902.82	2836.41
169	21.60	-839.38	44.36	-928.81	928.81
170	21.73	-784.08	41.64	-2836.41	1902.82
171	21.87	-572.91	32.39	-4646.52	4024.32
172	22.00	-111.68	30.11	-4693.45	5497.31
173	22.10	-9.25	298.29	-4720.29	3779.40
174	22.23	-31.53	568.57	-3532.13	2195.26
175	22.37	-44.83	689.08	-2079.04	1048.88
176	22.50	-48.86	717.71	-698.08	698.07
177	22.63	-44.83	689.08	-1048.89	2079.04
178	22.77	-31.53	568.57	-2195.26	3532.13
179	22.90	-9.25	298.29	-3779.40	4720.29
180	23.00	-111.68	30.11	-5497.31	4693.45
181	23.13	-572.91	32.38	-4024.32	4646.51
182	23.27	-784.08	41.62	-1902.81	2836.41
183	23.40	-839.38	44.34	-928.81	928.80
184	23.53	-784.09	41.62	-2836.42	1902.79
185	23.67	-572.92	32.37	-4646.53	4024.30
186	23.80	-111.68	30.11	-4693.46	5497.31
187	23.90	-9.28	298.28	-4720.30	3779.39

188	24.03	-31.56	568.56	-3532.14	2195.25
189	24.17	-44.87	689.07	-2079.06	1048.87
190	24.30	-48.91	717.70	-698.10	698.04
191	24.43	-44.89	689.07	-1048.91	2079.00
192	24.57	-31.60	568.55	-2195.30	3532.07
193	24.70	-9.35	298.27	-3779.45	4720.22
194	24.80	-111.70	30.11	-5497.45	4693.38
195	24.93	-572.95	32.25	-4024.19	4646.43
196	25.07	-784.12	41.47	-1902.69	2836.30
197	25.20	-839.43	44.16	-929.00	928.66
198	25.33	-784.15	41.40	-2836.66	1902.12
199	25.47	-573.00	32.10	-4646.84	4023.69
200	25.60	-111.77	30.11	-4693.82	5497.35
201	25.70	-9.67	298.15	-4720.67	3779.12
202	25.83	-32.02	568.39	-3532.60	2194.90
203	25.97	-45.43	688.85	-2079.65	1048.45
204	26.10	-49.59	717.44	-698.87	697.04
205	26.23	-45.69	688.72	-1049.78	2077.74
206	26.37	-32.57	568.10	-2196.33	3530.43
207	26.50	-10.55	297.67	-3780.91	4718.21
208	26.60	-112.30	30.10	-5501.51	4691.38
209	26.73	-573.89	30.56	-4020.26	4643.78
210	26.87	-785.34	39.42	-1898.98	2832.89
211	27.00	-840.99	41.74	-934.64	924.27
212	27.13	-786.06	38.44	-2843.90	1881.61
213	27.27	-575.49	28.46	-4656.32	4005.05
214	27.40	-114.48	30.08	-4704.87	5498.51
215	27.50	-15.06	293.97	-4731.75	3770.88
216	27.63	-38.42	563.18	-3546.35	2184.27
217	27.77	-53.16	682.18	-2097.47	1035.49
218	27.90	-58.90	709.26	-721.93	667.17
219	28.03	-56.68	678.16	-1077.03	2040.27
220	28.17	-45.68	554.24	-2229.43	3482.23
221	28.30	-26.11	279.05	-3829.02	4659.57
222	28.40	-130.83	30.01	-5636.87	4633.03
223	28.53	-604.10	12.04	-3924.04	4567.02
224	28.67	-824.99	20.26	-1858.24	2734.44
225	28.80	-893.66	23.62	-1101.76	796.77
226	28.93	-853.17	24.08	-3069.76	1225.87
227	29.07	-666.37	22.95	-4968.55	3386.73
228	29.20	-236.14	26.02	-4942.68	5496.38
229	29.33	0.00	210.13	-4973.70	3128.01
230	29.47	0.00	382.92	-3851.64	1425.79
231	29.60	0.00	416.26	-2771.80	376.76
232	29.73	-0.13	369.37	-2036.19	7.07
233	29.87	-20.31	292.36	-1929.75	103.04
234	30.00	-31.39	8.76	-1962.85	98.16

Armature e tensioni nei materiali del muro

Combinazione n° 21

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta sul lembo di monte in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta sul lembo di valle in [kg/cmq]

Nr.	Y	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fs}	σ _{fi}
1	0.00	100, 30	10.05	8.04	0.00	0.00	0.00	0.00
2	0.13	100, 31	10.05	8.04	0.05	0.03	-0.19	-0.66
3	0.25	100, 31	10.05	8.04	0.14	0.06	0.24	-1.86
4	0.38	100, 32	10.05	8.04	0.31	0.09	2.79	-3.95
5	0.50	100, 33	10.05	8.04	0.59	0.13	9.09	-6.98
6	0.63	100, 33	14.07	8.04	0.88	0.17	15.02	-10.39
7	0.75	100, 34	14.07	8.04	1.32	0.24	27.11	-15.21
8	0.88	100, 35	14.07	8.04	1.88	0.30	44.19	-21.33
9	1.00	100, 35	14.07	8.04	2.57	0.38	66.56	-28.79
10	1.13	100, 36	14.07	8.04	3.39	0.45	94.42	-37.62
11	1.25	100, 37	14.07	8.04	4.34	0.53	127.92	-47.84
12	1.38	100, 37	14.07	8.04	5.42	0.61	167.17	-59.46

13	1.50	100, 38	14.07	8.04	6.62	0.70	212.26	-72.47
14	1.63	100, 39	14.07	8.04	7.95	0.78	263.26	-86.89
15	1.75	100, 39	14.07	8.04	9.40	0.87	320.22	-102.70
16	1.88	100, 40	14.07	8.04	10.97	0.96	383.19	-119.89
17	2.00	100, 40	28.15	16.08	9.30	1.05	232.45	-109.76
18	2.13	100, 41	14.07	8.04	14.46	1.14	527.27	-158.36
19	2.25	100, 42	14.07	8.04	16.38	1.23	608.41	-179.62
20	2.38	100, 42	14.07	8.04	18.41	1.32	695.65	-202.20
21	2.50	100, 43	14.07	8.04	20.54	1.42	788.97	-226.08

Armature e tensioni nei materiali della fondazione

Combinazione n° 21

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta in corrispondenza del lembo inferiore in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta in corrispondenza del lembo superiore in [kg/cmq]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.09	0.21	0.97	5.02
2	0.07	100, 40	8.04	8.04	1.25	0.27	71.19	41.94
3	0.13	100, 40	8.04	8.04	2.02	0.61	115.29	37.10
4	0.20	100, 40	8.04	8.04	3.13	0.93	178.75	-28.69
5	0.27	100, 40	8.04	8.04	4.43	1.24	252.82	-40.59
6	0.33	100, 40	8.04	8.04	5.80	1.55	331.12	-53.16
7	0.40	100, 40	8.04	8.04	7.69	1.86	438.92	-70.46
8	0.46	100, 40	8.04	8.04	11.30	2.13	644.43	-103.45
9	0.52	100, 40	8.04	8.04	15.77	2.40	899.80	-144.45
10	0.57	100, 40	8.04	8.04	21.27	2.66	1213.69	-194.84
11	0.63	100, 40	8.04	10.05	25.61	2.92	1284.47	-248.92

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.01	-0.02	0.80	-0.13
2	0.07	100, 40	8.04	8.04	0.10	-0.11	-0.93	5.81
3	0.13	100, 40	8.04	8.04	0.36	-0.22	-3.25	20.26
4	0.20	100, 40	8.04	8.04	0.75	-0.34	-6.88	42.83
5	0.27	100, 40	8.04	8.04	1.29	-0.45	-11.81	73.60
6	0.33	100, 40	8.04	8.04	1.97	-0.56	-18.08	112.64
7	0.40	100, 40	8.04	8.04	2.87	-0.67	-26.33	163.99
8	0.47	100, 40	8.04	8.04	3.94	-0.78	-36.10	224.88
9	0.53	100, 40	8.04	8.04	5.18	-0.89	-47.41	295.30
10	0.60	100, 40	8.04	8.04	6.58	-1.01	-60.24	375.26
11	0.67	100, 40	8.04	8.04	8.15	-1.12	-74.60	464.70
12	0.73	100, 40	8.04	8.04	9.88	-1.23	-90.47	563.54
13	0.80	100, 40	8.04	8.04	11.78	-1.34	-107.90	672.14
14	0.84	100, 40	8.04	8.04	13.03	-1.42	-119.33	743.34

Armature e tensioni piastre

Combinazione n° 21

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	-2.84	44.52	0.47	0.01
2	0.13	2.83	2.83	-2.66	41.79	0.44	0.01
3	0.27	2.83	2.83	-2.07	32.51	0.34	0.03

4	0.40	2.83	2.83	1.30	14.22	0.15	-0.04
5	0.50	2.83	2.83	9.28	-0.59	0.10	-0.05
6	0.63	2.83	2.83	31.64	-2.02	0.33	-0.04
7	0.77	2.83	2.83	44.99	-2.87	0.47	-0.02
8	0.90	2.83	2.83	49.04	-3.13	0.52	0.01
9	1.03	2.83	2.83	44.99	-2.87	0.47	0.02
10	1.17	2.83	2.83	31.64	-2.02	0.33	0.04
11	1.30	2.83	2.83	9.28	-0.59	0.10	0.05
12	1.40	2.83	2.83	1.30	14.22	0.15	0.04
13	1.53	2.83	2.83	-2.07	32.51	0.34	-0.03
14	1.67	2.83	2.83	-2.66	41.79	0.44	-0.01
15	1.80	2.83	2.83	-2.84	44.52	0.47	0.01
16	1.93	2.83	2.83	-2.66	41.79	0.44	0.01
17	2.07	2.83	2.83	-2.07	32.51	0.34	0.03
18	2.20	2.83	2.83	1.30	14.22	0.15	-0.04
19	2.30	2.83	2.83	9.28	-0.59	0.10	-0.05
20	2.43	2.83	2.83	31.64	-2.02	0.33	-0.04
21	2.57	2.83	2.83	44.99	-2.87	0.47	-0.02
22	2.70	2.83	2.83	49.04	-3.13	0.52	0.01
23	2.83	2.83	2.83	44.99	-2.87	0.47	0.02
24	2.97	2.83	2.83	31.64	-2.02	0.33	0.04
25	3.10	2.83	2.83	9.28	-0.59	0.10	0.05
26	3.20	2.83	2.83	1.30	14.22	0.15	0.04
27	3.33	2.83	2.83	-2.07	32.51	0.34	-0.03
28	3.47	2.83	2.83	-2.66	41.79	0.44	-0.01
29	3.60	2.83	2.83	-2.84	44.52	0.47	0.01
30	3.73	2.83	2.83	-2.66	41.79	0.44	0.01
31	3.87	2.83	2.83	-2.07	32.51	0.34	0.03
32	4.00	2.83	2.83	1.30	14.22	0.15	-0.04
33	4.10	2.83	2.83	9.28	-0.59	0.10	-0.05
34	4.23	2.83	2.83	31.64	-2.02	0.33	-0.04
35	4.37	2.83	2.83	44.99	-2.87	0.47	-0.02
36	4.50	2.83	2.83	49.04	-3.13	0.52	0.01
37	4.63	2.83	2.83	44.99	-2.87	0.47	0.02
38	4.77	2.83	2.83	31.64	-2.02	0.33	0.04
39	4.90	2.83	2.83	9.28	-0.59	0.10	0.05
40	5.00	2.83	2.83	1.30	14.22	0.15	0.04
41	5.13	2.83	2.83	-2.07	32.51	0.34	-0.03
42	5.27	2.83	2.83	-2.66	41.79	0.44	-0.01
43	5.40	2.83	2.83	-2.84	44.52	0.47	0.01
44	5.53	2.83	2.83	-2.66	41.79	0.44	0.01
45	5.67	2.83	2.83	-2.07	32.51	0.34	0.03
46	5.80	2.83	2.83	1.30	14.22	0.15	-0.04
47	5.90	2.83	2.83	9.28	-0.59	0.10	-0.05
48	6.03	2.83	2.83	31.64	-2.02	0.33	-0.04
49	6.17	2.83	2.83	44.99	-2.87	0.47	-0.02
50	6.30	2.83	2.83	49.04	-3.13	0.52	0.01
51	6.43	2.83	2.83	44.99	-2.87	0.47	0.02
52	6.57	2.83	2.83	31.64	-2.02	0.33	0.04
53	6.70	2.83	2.83	9.28	-0.59	0.10	0.05
54	6.80	2.83	2.83	1.30	14.22	0.15	0.04
55	6.93	2.83	2.83	-2.07	32.51	0.34	-0.03
56	7.07	2.83	2.83	-2.66	41.79	0.44	-0.01
57	7.20	2.83	2.83	-2.84	44.52	0.47	0.01
58	7.33	2.83	2.83	-2.66	41.79	0.44	0.01
59	7.47	2.83	2.83	-2.07	32.51	0.34	0.03
60	7.60	2.83	2.83	1.30	14.22	0.15	-0.04
61	7.70	2.83	2.83	9.28	-0.59	0.10	-0.05
62	7.83	2.83	2.83	31.64	-2.02	0.33	-0.04
63	7.97	2.83	2.83	44.99	-2.87	0.47	-0.02
64	8.10	2.83	2.83	49.04	-3.13	0.52	-0.01
65	8.23	2.83	2.83	44.99	-2.87	0.47	0.02
66	8.37	2.83	2.83	31.64	-2.02	0.33	0.04
67	8.50	2.83	2.83	9.28	-0.59	0.10	0.05
68	8.60	2.83	2.83	1.30	14.22	0.15	0.04
69	8.73	2.83	2.83	-2.07	32.51	0.34	-0.03
70	8.87	2.83	2.83	-2.66	41.79	0.44	-0.01
71	9.00	2.83	2.83	-2.84	44.52	0.47	-0.01
72	9.13	2.83	2.83	-2.66	41.79	0.44	0.01
73	9.27	2.83	2.83	-2.07	32.51	0.34	0.03
74	9.40	2.83	2.83	1.30	14.22	0.15	-0.04
75	9.50	2.83	2.83	9.28	-0.59	0.10	-0.05
76	9.63	2.83	2.83	31.64	-2.02	0.33	-0.04
77	9.77	2.83	2.83	44.99	-2.87	0.47	-0.02
78	9.90	2.83	2.83	49.04	-3.13	0.52	-0.01
79	10.03	2.83	2.83	44.99	-2.87	0.47	0.02
80	10.17	2.83	2.83	31.64	-2.02	0.33	0.04

81	10.30	2.83	2.83	9.28	-0.59	0.10	0.05
82	10.40	2.83	2.83	1.30	14.22	0.15	0.04
83	10.53	2.83	2.83	-2.07	32.51	0.34	-0.03
84	10.67	2.83	2.83	-2.66	41.79	0.44	-0.01
85	10.80	2.83	2.83	-2.84	44.52	0.47	-0.01
86	10.93	2.83	2.83	-2.66	41.79	0.44	0.01
87	11.07	2.83	2.83	-2.07	32.51	0.34	0.03
88	11.20	2.83	2.83	1.30	14.22	0.15	-0.04
89	11.30	2.83	2.83	9.28	-0.59	0.10	-0.05
90	11.43	2.83	2.83	31.64	-2.02	0.33	-0.04
91	11.57	2.83	2.83	44.99	-2.87	0.47	-0.02
92	11.70	2.83	2.83	49.04	-3.13	0.52	-0.01
93	11.83	2.83	2.83	44.99	-2.87	0.47	0.02
94	11.97	2.83	2.83	31.64	-2.02	0.33	0.04
95	12.10	2.83	2.83	9.28	-0.59	0.10	0.05
96	12.20	2.83	2.83	1.30	14.22	0.15	0.04
97	12.33	2.83	2.83	-2.07	32.51	0.34	-0.03
98	12.47	2.83	2.83	-2.66	41.79	0.44	-0.01
99	12.60	2.83	2.83	-2.84	44.52	0.47	-0.01
100	12.73	2.83	2.83	-2.66	41.79	0.44	0.01
101	12.87	2.83	2.83	-2.07	32.51	0.34	0.03
102	13.00	2.83	2.83	1.30	14.22	0.15	-0.04
103	13.10	2.83	2.83	9.28	-0.59	0.10	-0.05
104	13.23	2.83	2.83	31.64	-2.02	0.33	-0.04
105	13.37	2.83	2.83	44.99	-2.87	0.47	-0.02
106	13.50	2.83	2.83	49.04	-3.13	0.52	-0.01
107	13.63	2.83	2.83	44.99	-2.87	0.47	0.02
108	13.77	2.83	2.83	31.64	-2.02	0.33	0.04
109	13.90	2.83	2.83	9.28	-0.59	0.10	0.05
110	14.00	2.83	2.83	1.30	14.22	0.15	0.04
111	14.13	2.83	2.83	-2.07	32.51	0.34	-0.03
112	14.27	2.83	2.83	-2.66	41.79	0.44	-0.01
113	14.40	2.83	2.83	-2.84	44.52	0.47	-0.01
114	14.53	2.83	2.83	-2.66	41.79	0.44	0.01
115	14.67	2.83	2.83	-2.07	32.51	0.34	0.03
116	14.80	2.83	2.83	1.30	14.22	0.15	-0.04
117	14.90	2.83	2.83	9.28	-0.59	0.10	-0.05
118	15.03	2.83	2.83	31.64	-2.02	0.33	-0.04
119	15.17	2.83	2.83	44.99	-2.87	0.47	-0.02
120	15.30	2.83	2.83	49.04	-3.13	0.52	-0.01
121	15.43	2.83	2.83	44.99	-2.87	0.47	0.02
122	15.57	2.83	2.83	31.64	-2.02	0.33	0.04
123	15.70	2.83	2.83	9.28	-0.59	0.10	0.05
124	15.80	2.83	2.83	1.30	14.22	0.15	0.04
125	15.93	2.83	2.83	-2.07	32.51	0.34	-0.03
126	16.07	2.83	2.83	-2.66	41.79	0.44	-0.01
127	16.20	2.83	2.83	-2.84	44.52	0.47	-0.01
128	16.33	2.83	2.83	-2.66	41.79	0.44	0.01
129	16.47	2.83	2.83	-2.07	32.51	0.34	0.03
130	16.60	2.83	2.83	1.30	14.22	0.15	-0.04
131	16.70	2.83	2.83	9.28	-0.59	0.10	-0.05
132	16.83	2.83	2.83	31.64	-2.02	0.33	-0.04
133	16.97	2.83	2.83	44.99	-2.87	0.47	-0.02
134	17.10	2.83	2.83	49.04	-3.13	0.52	-0.01
135	17.23	2.83	2.83	44.99	-2.87	0.47	0.02
136	17.37	2.83	2.83	31.64	-2.02	0.33	0.04
137	17.50	2.83	2.83	9.28	-0.59	0.10	0.05
138	17.60	2.83	2.83	1.30	14.22	0.15	0.04
139	17.73	2.83	2.83	-2.07	32.51	0.34	-0.03
140	17.87	2.83	2.83	-2.66	41.79	0.44	-0.01
141	18.00	2.83	2.83	-2.84	44.52	0.47	-0.01
142	18.13	2.83	2.83	-2.66	41.79	0.44	0.01
143	18.27	2.83	2.83	-2.07	32.51	0.34	0.03
144	18.40	2.83	2.83	1.30	14.22	0.15	-0.04
145	18.50	2.83	2.83	9.28	-0.59	0.10	-0.05
146	18.63	2.83	2.83	31.64	-2.02	0.33	-0.04
147	18.77	2.83	2.83	44.99	-2.87	0.47	-0.02
148	18.90	2.83	2.83	49.04	-3.13	0.52	-0.01
149	19.03	2.83	2.83	44.99	-2.87	0.47	0.02
150	19.17	2.83	2.83	31.64	-2.02	0.33	0.04
151	19.30	2.83	2.83	9.28	-0.59	0.10	0.05
152	19.40	2.83	2.83	1.30	14.22	0.15	0.04
153	19.53	2.83	2.83	-2.07	32.51	0.34	-0.03
154	19.67	2.83	2.83	-2.66	41.79	0.44	-0.01
155	19.80	2.83	2.83	-2.84	44.52	0.47	-0.01
156	19.93	2.83	2.83	-2.66	41.79	0.44	0.01
157	20.07	2.83	2.83	-2.07	32.51	0.34	0.03

158	20.20	2.83	2.83	1.30	14.22	0.15	-0.04
159	20.30	2.83	2.83	9.28	-0.59	0.10	-0.05
160	20.43	2.83	2.83	31.64	-2.02	0.33	-0.04
161	20.57	2.83	2.83	44.99	-2.87	0.47	-0.02
162	20.70	2.83	2.83	49.04	-3.13	0.52	-0.01
163	20.83	2.83	2.83	44.99	-2.87	0.47	0.02
164	20.97	2.83	2.83	31.64	-2.02	0.33	0.04
165	21.10	2.83	2.83	9.28	-0.59	0.10	0.05
166	21.20	2.83	2.83	1.30	14.22	0.15	0.04
167	21.33	2.83	2.83	-2.07	32.51	0.34	-0.03
168	21.47	2.83	2.83	-2.66	41.79	0.44	-0.01
169	21.60	2.83	2.83	-2.84	44.52	0.47	-0.01
170	21.73	2.83	2.83	-2.66	41.79	0.44	0.01
171	21.87	2.83	2.83	-2.07	32.51	0.34	0.03
172	22.00	2.83	2.83	1.30	14.22	0.15	-0.04
173	22.10	2.83	2.83	9.28	-0.59	0.10	-0.05
174	22.23	2.83	2.83	31.64	-2.02	0.33	-0.04
175	22.37	2.83	2.83	45.00	-2.87	0.47	-0.02
176	22.50	2.83	2.83	49.04	-3.13	0.52	-0.01
177	22.63	2.83	2.83	45.00	-2.87	0.47	0.02
178	22.77	2.83	2.83	31.65	-2.02	0.33	0.04
179	22.90	2.83	2.83	9.29	-0.59	0.10	0.05
180	23.00	2.83	2.83	1.30	14.21	0.15	0.04
181	23.13	2.83	2.83	-2.07	32.50	0.34	-0.03
182	23.27	2.83	2.83	-2.66	41.78	0.44	-0.01
183	23.40	2.83	2.83	-2.84	44.51	0.47	-0.01
184	23.53	2.83	2.83	-2.66	41.77	0.44	0.01
185	23.67	2.83	2.83	-2.07	32.49	0.34	0.03
186	23.80	2.83	2.83	1.30	14.20	0.15	-0.04
187	23.90	2.83	2.83	9.31	-0.59	0.10	-0.05
188	24.03	2.83	2.83	31.68	-2.02	0.33	-0.04
189	24.17	2.83	2.83	45.04	-2.87	0.47	-0.02
190	24.30	2.83	2.83	49.09	-3.13	0.52	-0.01
191	24.43	2.83	2.83	45.06	-2.87	0.47	0.02
192	24.57	2.83	2.83	31.72	-2.02	0.33	0.04
193	24.70	2.83	2.83	9.38	-0.60	0.10	0.05
194	24.80	2.83	2.83	1.30	14.12	0.15	0.04
195	24.93	2.83	2.83	-2.06	32.37	0.34	-0.03
196	25.07	2.83	2.83	-2.65	41.62	0.44	-0.01
197	25.20	2.83	2.83	-2.83	44.33	0.47	-0.01
198	25.33	2.83	2.83	-2.65	41.55	0.44	0.01
199	25.47	2.83	2.83	-2.05	32.22	0.34	0.03
200	25.60	2.83	2.83	1.31	13.91	0.15	-0.04
201	25.70	2.83	2.83	9.71	-0.62	0.10	-0.05
202	25.83	2.83	2.83	32.14	-2.05	0.34	-0.04
203	25.97	2.83	2.83	45.60	-2.91	0.48	-0.02
204	26.10	2.83	2.83	49.77	-3.17	0.52	-0.01
205	26.23	2.83	2.83	45.86	-2.92	0.48	0.02
206	26.37	2.83	2.83	32.69	-2.08	0.34	0.04
207	26.50	2.83	2.83	10.59	-0.68	0.11	0.05
208	26.60	2.83	2.83	1.31	12.92	0.14	0.04
209	26.73	2.83	2.83	-1.96	30.67	0.32	-0.03
210	26.87	2.83	2.83	-2.52	39.57	0.42	-0.01
211	27.00	2.83	2.83	-2.67	41.89	0.44	-0.01
212	27.13	2.83	2.83	-2.46	38.58	0.41	-0.01
213	27.27	2.83	2.83	-1.82	28.56	0.30	-0.03
214	27.40	2.83	2.83	1.31	10.08	0.11	-0.04
215	27.50	2.83	2.83	15.12	-0.96	0.16	-0.05
216	27.63	2.83	2.83	38.57	-2.46	0.41	-0.04
217	27.77	2.83	2.83	53.35	-3.40	0.56	-0.02
218	27.90	2.83	2.83	59.12	-3.77	0.62	-0.02
219	28.03	2.83	2.83	56.89	-3.63	0.60	-0.02
220	28.17	2.83	2.83	45.85	-2.92	0.48	-0.03
221	28.30	2.83	2.83	26.21	-1.67	0.28	-0.04
222	28.40	2.83	2.83	7.41	3.99	0.08	-0.05
223	28.53	2.83	2.83	-0.77	12.08	0.13	-0.05
224	28.67	2.83	2.83	-1.30	20.33	0.21	-0.03
225	28.80	2.83	2.83	-1.51	23.71	0.25	-0.02
226	28.93	2.83	2.83	-1.54	24.17	0.25	-0.02
227	29.07	2.83	2.83	-1.47	23.04	0.24	-0.01
228	29.20	2.83	2.83	-1.35	21.20	0.22	-0.01
229	29.33	2.83	2.83	-1.23	19.29	0.20	-0.01
230	29.47	2.83	2.83	-1.12	17.52	0.18	-0.01
231	29.60	2.83	2.83	-1.02	16.01	0.17	-0.01
232	29.73	2.83	2.83	-0.94	14.71	0.15	0.00
233	29.87	2.83	2.83	1.45	13.82	0.15	0.01
234	30.00	2.83	2.83	-0.56	8.79	0.09	0.01

Piastra fondazione valle

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	842.51	-53.72	8.85	-0.22
2	0.13	2.83	2.83	787.01	-50.18	8.27	-0.37
3	0.27	2.83	2.83	575.05	-36.67	6.04	-0.76
4	0.40	2.83	2.83	112.10	30.22	1.18	0.95
5	0.50	2.83	2.83	-19.09	299.40	3.15	-0.87
6	0.63	2.83	2.83	-36.39	570.69	6.00	-0.63
7	0.77	2.83	2.83	-44.10	691.65	7.27	-0.28
8	0.90	2.83	2.83	-45.94	720.39	7.57	0.12
9	1.03	2.83	2.83	-44.10	691.65	7.27	0.28
10	1.17	2.83	2.83	-36.39	570.69	6.00	0.63
11	1.30	2.83	2.83	-19.09	299.40	3.15	0.87
12	1.40	2.83	2.83	112.10	30.22	1.18	-0.95
13	1.53	2.83	2.83	575.05	-36.67	6.04	0.76
14	1.67	2.83	2.83	787.01	-50.18	8.27	0.37
15	1.80	2.83	2.83	842.51	-53.72	8.85	0.17
16	1.93	2.83	2.83	787.01	-50.18	8.27	-0.37
17	2.07	2.83	2.83	575.05	-36.67	6.04	-0.76
18	2.20	2.83	2.83	112.10	30.22	1.18	0.95
19	2.30	2.83	2.83	-19.09	299.40	3.15	-0.87
20	2.43	2.83	2.83	-36.39	570.69	6.00	-0.63
21	2.57	2.83	2.83	-44.10	691.65	7.27	-0.28
22	2.70	2.83	2.83	-45.94	720.39	7.57	0.12
23	2.83	2.83	2.83	-44.10	691.65	7.27	0.28
24	2.97	2.83	2.83	-36.39	570.69	6.00	0.63
25	3.10	2.83	2.83	-19.09	299.40	3.15	0.87
26	3.20	2.83	2.83	112.10	30.22	1.18	-0.95
27	3.33	2.83	2.83	575.05	-36.67	6.04	0.76
28	3.47	2.83	2.83	787.01	-50.18	8.27	0.37
29	3.60	2.83	2.83	842.51	-53.72	8.85	0.17
30	3.73	2.83	2.83	787.01	-50.18	8.27	-0.37
31	3.87	2.83	2.83	575.05	-36.67	6.04	-0.76
32	4.00	2.83	2.83	112.10	30.22	1.18	0.95
33	4.10	2.83	2.83	-19.09	299.40	3.15	-0.87
34	4.23	2.83	2.83	-36.39	570.69	6.00	-0.63
35	4.37	2.83	2.83	-44.10	691.65	7.27	-0.28
36	4.50	2.83	2.83	-45.94	720.39	7.57	-0.12
37	4.63	2.83	2.83	-44.10	691.65	7.27	0.28
38	4.77	2.83	2.83	-36.39	570.69	6.00	0.63
39	4.90	2.83	2.83	-19.09	299.40	3.15	0.87
40	5.00	2.83	2.83	112.10	30.22	1.18	-0.95
41	5.13	2.83	2.83	575.05	-36.67	6.04	0.76
42	5.27	2.83	2.83	787.01	-50.18	8.27	0.37
43	5.40	2.83	2.83	842.51	-53.72	8.85	-0.17
44	5.53	2.83	2.83	787.01	-50.18	8.27	-0.37
45	5.67	2.83	2.83	575.05	-36.67	6.04	-0.76
46	5.80	2.83	2.83	112.10	30.22	1.18	0.95
47	5.90	2.83	2.83	-19.09	299.40	3.15	-0.87
48	6.03	2.83	2.83	-36.39	570.69	6.00	-0.63
49	6.17	2.83	2.83	-44.10	691.65	7.27	-0.28
50	6.30	2.83	2.83	-45.94	720.39	7.57	0.12
51	6.43	2.83	2.83	-44.10	691.65	7.27	0.28
52	6.57	2.83	2.83	-36.39	570.69	6.00	0.63
53	6.70	2.83	2.83	-19.09	299.40	3.15	0.87
54	6.80	2.83	2.83	112.10	30.22	1.18	-0.95
55	6.93	2.83	2.83	575.05	-36.67	6.04	0.76
56	7.07	2.83	2.83	787.01	-50.18	8.27	0.37
57	7.20	2.83	2.83	842.51	-53.72	8.85	0.17
58	7.33	2.83	2.83	787.01	-50.18	8.27	-0.37
59	7.47	2.83	2.83	575.05	-36.67	6.04	-0.76
60	7.60	2.83	2.83	112.10	30.22	1.18	0.95
61	7.70	2.83	2.83	-19.09	299.40	3.15	-0.87
62	7.83	2.83	2.83	-36.39	570.69	6.00	-0.63
63	7.97	2.83	2.83	-44.10	691.65	7.27	-0.28
64	8.10	2.83	2.83	-45.94	720.39	7.57	0.12
65	8.23	2.83	2.83	-44.10	691.65	7.27	0.28
66	8.37	2.83	2.83	-36.39	570.69	6.00	0.63
67	8.50	2.83	2.83	-19.09	299.40	3.15	0.87
68	8.60	2.83	2.83	112.10	30.22	1.18	-0.95
69	8.73	2.83	2.83	575.05	-36.67	6.04	0.76
70	8.87	2.83	2.83	787.01	-50.18	8.27	0.37
71	9.00	2.83	2.83	842.51	-53.72	8.85	0.17
72	9.13	2.83	2.83	787.01	-50.18	8.27	-0.37
73	9.27	2.83	2.83	575.05	-36.67	6.04	-0.76

74	9.40	2.83	2.83	112.10	30.22	1.18	0.95
75	9.50	2.83	2.83	-19.09	299.40	3.15	-0.87
76	9.63	2.83	2.83	-36.39	570.69	6.00	-0.63
77	9.77	2.83	2.83	-44.10	691.65	7.27	-0.28
78	9.90	2.83	2.83	-45.94	720.39	7.57	-0.12
79	10.03	2.83	2.83	-44.10	691.65	7.27	0.28
80	10.17	2.83	2.83	-36.39	570.69	6.00	0.63
81	10.30	2.83	2.83	-19.09	299.40	3.15	0.87
82	10.40	2.83	2.83	112.10	30.22	1.18	-0.95
83	10.53	2.83	2.83	575.05	-36.67	6.04	0.76
84	10.67	2.83	2.83	787.01	-50.18	8.27	0.37
85	10.80	2.83	2.83	842.51	-53.72	8.85	-0.17
86	10.93	2.83	2.83	787.01	-50.18	8.27	-0.37
87	11.07	2.83	2.83	575.05	-36.67	6.04	-0.76
88	11.20	2.83	2.83	112.10	30.22	1.18	0.95
89	11.30	2.83	2.83	-19.09	299.40	3.15	-0.87
90	11.43	2.83	2.83	-36.39	570.69	6.00	-0.63
91	11.57	2.83	2.83	-44.10	691.65	7.27	-0.28
92	11.70	2.83	2.83	-45.94	720.39	7.57	0.12
93	11.83	2.83	2.83	-44.10	691.65	7.27	0.28
94	11.97	2.83	2.83	-36.39	570.69	6.00	0.63
95	12.10	2.83	2.83	-19.09	299.40	3.15	0.87
96	12.20	2.83	2.83	112.10	30.22	1.18	-0.95
97	12.33	2.83	2.83	575.05	-36.67	6.04	0.76
98	12.47	2.83	2.83	787.01	-50.18	8.27	0.37
99	12.60	2.83	2.83	842.51	-53.72	8.85	-0.17
100	12.73	2.83	2.83	787.01	-50.18	8.27	-0.37
101	12.87	2.83	2.83	575.05	-36.67	6.04	-0.76
102	13.00	2.83	2.83	112.10	30.22	1.18	0.95
103	13.10	2.83	2.83	-19.09	299.40	3.15	-0.87
104	13.23	2.83	2.83	-36.39	570.69	6.00	-0.63
105	13.37	2.83	2.83	-44.10	691.65	7.27	-0.28
106	13.50	2.83	2.83	-45.94	720.39	7.57	-0.12
107	13.63	2.83	2.83	-44.10	691.65	7.27	0.28
108	13.77	2.83	2.83	-36.39	570.69	6.00	0.63
109	13.90	2.83	2.83	-19.09	299.40	3.15	0.87
110	14.00	2.83	2.83	112.10	30.22	1.18	-0.95
111	14.13	2.83	2.83	575.05	-36.67	6.04	0.76
112	14.27	2.83	2.83	787.01	-50.18	8.27	0.37
113	14.40	2.83	2.83	842.51	-53.72	8.85	-0.17
114	14.53	2.83	2.83	787.01	-50.18	8.27	-0.37
115	14.67	2.83	2.83	575.05	-36.67	6.04	-0.76
116	14.80	2.83	2.83	112.10	30.22	1.18	0.95
117	14.90	2.83	2.83	-19.09	299.40	3.15	-0.87
118	15.03	2.83	2.83	-36.39	570.69	6.00	-0.63
119	15.17	2.83	2.83	-44.10	691.65	7.27	-0.28
120	15.30	2.83	2.83	-45.94	720.39	7.57	-0.12
121	15.43	2.83	2.83	-44.10	691.65	7.27	0.28
122	15.57	2.83	2.83	-36.39	570.69	6.00	0.63
123	15.70	2.83	2.83	-19.09	299.40	3.15	0.87
124	15.80	2.83	2.83	112.10	30.22	1.18	-0.95
125	15.93	2.83	2.83	575.05	-36.67	6.04	0.76
126	16.07	2.83	2.83	787.01	-50.18	8.27	0.37
127	16.20	2.83	2.83	842.51	-53.72	8.85	-0.17
128	16.33	2.83	2.83	787.01	-50.18	8.27	-0.37
129	16.47	2.83	2.83	575.05	-36.67	6.04	-0.76
130	16.60	2.83	2.83	112.10	30.22	1.18	0.95
131	16.70	2.83	2.83	-19.09	299.40	3.15	-0.87
132	16.83	2.83	2.83	-36.39	570.69	6.00	-0.63
133	16.97	2.83	2.83	-44.10	691.65	7.27	-0.28
134	17.10	2.83	2.83	-45.94	720.39	7.57	-0.12
135	17.23	2.83	2.83	-44.10	691.65	7.27	0.28
136	17.37	2.83	2.83	-36.39	570.69	6.00	0.63
137	17.50	2.83	2.83	-19.09	299.40	3.15	0.87
138	17.60	2.83	2.83	112.10	30.22	1.18	-0.95
139	17.73	2.83	2.83	575.05	-36.67	6.04	0.76
140	17.87	2.83	2.83	787.01	-50.18	8.27	0.37
141	18.00	2.83	2.83	842.51	-53.72	8.85	-0.17
142	18.13	2.83	2.83	787.01	-50.18	8.27	-0.37
143	18.27	2.83	2.83	575.05	-36.67	6.04	-0.76
144	18.40	2.83	2.83	112.10	30.22	1.18	0.95
145	18.50	2.83	2.83	-19.09	299.40	3.15	-0.87
146	18.63	2.83	2.83	-36.39	570.69	6.00	-0.63
147	18.77	2.83	2.83	-44.10	691.65	7.27	-0.28
148	18.90	2.83	2.83	-45.94	720.39	7.57	-0.12
149	19.03	2.83	2.83	-44.10	691.65	7.27	0.28
150	19.17	2.83	2.83	-36.39	570.69	6.00	0.63

151	19.30	2.83	2.83	-19.09	299.40	3.15	0.87
152	19.40	2.83	2.83	112.10	30.22	1.18	-0.95
153	19.53	2.83	2.83	575.05	-36.67	6.04	0.76
154	19.67	2.83	2.83	787.01	-50.18	8.27	0.37
155	19.80	2.83	2.83	842.51	-53.72	8.85	-0.17
156	19.93	2.83	2.83	787.01	-50.18	8.27	-0.37
157	20.07	2.83	2.83	575.05	-36.67	6.04	-0.76
158	20.20	2.83	2.83	112.10	30.22	1.18	0.95
159	20.30	2.83	2.83	-19.09	299.40	3.15	-0.87
160	20.43	2.83	2.83	-36.39	570.69	6.00	-0.63
161	20.57	2.83	2.83	-44.10	691.65	7.27	-0.28
162	20.70	2.83	2.83	-45.94	720.39	7.57	-0.12
163	20.83	2.83	2.83	-44.10	691.65	7.27	0.28
164	20.97	2.83	2.83	-36.39	570.69	6.00	0.63
165	21.10	2.83	2.83	-19.09	299.40	3.15	0.87
166	21.20	2.83	2.83	112.10	30.22	1.18	-0.95
167	21.33	2.83	2.83	575.05	-36.67	6.04	0.76
168	21.47	2.83	2.83	787.01	-50.18	8.27	0.37
169	21.60	2.83	2.83	842.51	-53.72	8.85	-0.17
170	21.73	2.83	2.83	787.01	-50.18	8.27	-0.37
171	21.87	2.83	2.83	575.05	-36.67	6.04	-0.76
172	22.00	2.83	2.83	112.10	30.22	1.18	0.95
173	22.10	2.83	2.83	-19.09	299.40	3.15	-0.87
174	22.23	2.83	2.83	-36.39	570.69	6.00	-0.63
175	22.37	2.83	2.83	-44.10	691.65	7.27	-0.28
176	22.50	2.83	2.83	-45.94	720.39	7.57	-0.12
177	22.63	2.83	2.83	-44.10	691.65	7.27	0.28
178	22.77	2.83	2.83	-36.39	570.69	6.00	0.63
179	22.90	2.83	2.83	-19.09	299.40	3.15	0.87
180	23.00	2.83	2.83	112.10	30.22	1.18	-0.95
181	23.13	2.83	2.83	575.05	-36.67	6.04	0.76
182	23.27	2.83	2.83	787.01	-50.18	8.27	0.37
183	23.40	2.83	2.83	842.51	-53.72	8.85	-0.17
184	23.53	2.83	2.83	787.01	-50.18	8.27	-0.37
185	23.67	2.83	2.83	575.05	-36.67	6.04	-0.76
186	23.80	2.83	2.83	112.10	30.22	1.18	0.95
187	23.90	2.83	2.83	-19.09	299.40	3.15	-0.87
188	24.03	2.83	2.83	-36.39	570.68	6.00	-0.63
189	24.17	2.83	2.83	-44.10	691.64	7.27	-0.28
190	24.30	2.83	2.83	-45.94	720.38	7.57	-0.12
191	24.43	2.83	2.83	-44.10	691.64	7.27	0.28
192	24.57	2.83	2.83	-36.39	570.67	6.00	0.63
193	24.70	2.83	2.83	-19.09	299.38	3.15	0.87
194	24.80	2.83	2.83	112.12	30.22	1.18	-0.95
195	24.93	2.83	2.83	575.08	-36.67	6.04	0.76
196	25.07	2.83	2.83	787.05	-50.19	8.27	0.37
197	25.20	2.83	2.83	842.56	-53.73	8.85	-0.17
198	25.33	2.83	2.83	787.07	-50.19	8.27	-0.37
199	25.47	2.83	2.83	575.13	-36.67	6.04	-0.76
200	25.60	2.83	2.83	112.19	30.22	1.18	0.95
201	25.70	2.83	2.83	-19.08	299.26	3.14	-0.87
202	25.83	2.83	2.83	-36.38	570.51	6.00	-0.63
203	25.97	2.83	2.83	-44.09	691.42	7.27	-0.28
204	26.10	2.83	2.83	-45.92	720.11	7.57	-0.12
205	26.23	2.83	2.83	-44.08	691.29	7.26	0.28
206	26.37	2.83	2.83	-36.36	570.22	5.99	0.63
207	26.50	2.83	2.83	-19.05	298.78	3.14	0.86
208	26.60	2.83	2.83	112.72	30.22	1.18	-0.95
209	26.73	2.83	2.83	576.03	-36.73	6.05	0.76
210	26.87	2.83	2.83	788.26	-50.26	8.28	0.37
211	27.00	2.83	2.83	844.13	-53.83	8.87	-0.17
212	27.13	2.83	2.83	788.99	-50.31	8.29	-0.37
213	27.27	2.83	2.83	577.64	-36.83	6.07	-0.76
214	27.40	2.83	2.83	114.91	30.19	1.21	0.95
215	27.50	2.83	2.83	-18.81	295.06	3.10	-0.87
216	27.63	2.83	2.83	-36.05	565.28	5.94	-0.64
217	27.77	2.83	2.83	-43.66	684.72	7.20	-0.29
218	27.90	2.83	2.83	-45.40	711.91	7.48	-0.13
219	28.03	2.83	2.83	-43.40	680.68	7.15	0.32
220	28.17	2.83	2.83	-35.47	556.31	5.85	0.62
221	28.30	2.83	2.83	-17.86	280.09	2.94	0.85
222	28.40	2.83	2.83	131.31	30.12	1.38	-0.98
223	28.53	2.83	2.83	606.36	-38.66	6.37	0.73
224	28.67	2.83	2.83	828.06	-52.80	8.70	0.33
225	28.80	2.83	2.83	896.99	-57.20	9.43	-0.20
226	28.93	2.83	2.83	856.35	-54.61	9.00	-0.37
227	29.07	2.83	2.83	668.85	-42.65	7.03	-0.84

228	29.20	2.83	2.83	237.02	26.12	2.49	-0.98
229	29.33	2.83	2.83	-13.45	210.91	2.22	-0.89
230	29.47	2.83	2.83	-24.51	384.35	4.04	-0.66
231	29.60	2.83	2.83	-26.64	417.81	4.39	-0.41
232	29.73	2.83	2.83	-23.64	370.75	3.90	-0.36
233	29.87	2.83	2.83	20.39	293.45	3.08	-0.35
234	30.00	2.83	2.83	31.50	5.88	0.33	-0.33

Verifiche a fessurazione

Combinazione n° 21

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

A_{fs} area di armatura in corrispondenza del lembo di monte in [cmq]

A_{fi} area di armatura in corrispondenza del lembo di valle in [cmq]

M_{pr} Momento di prima fessurazione espressa in [kgm]

M Momento agente nella sezione espressa in [kgm]

ε_m deformazione media espressa in [%]

s_m Distanza media tra le fessure espressa in [mm]

w Apertura media della fessura espressa in [mm]

Verifica fessurazione paramento

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	0.00	10.05	8.04	-2448	0	0.0000	0.00	0.000
2	0.13	10.05	8.04	-2552	-3	0.0000	0.00	0.000
3	0.25	10.05	8.04	-2659	-15	0.0000	0.00	0.000
4	0.38	10.05	8.04	-2767	-36	0.0000	0.00	0.000
5	0.50	10.05	8.04	-2878	-69	0.0000	0.00	0.000
6	0.63	14.07	8.04	-3106	-114	0.0000	0.00	0.000
7	0.75	14.07	8.04	-3224	-179	0.0000	0.00	0.000
8	0.88	14.07	8.04	-3344	-266	0.0000	0.00	0.000
9	1.00	14.07	8.04	-3466	-379	0.0000	0.00	0.000
10	1.13	14.07	8.04	-3590	-519	0.0000	0.00	0.000
11	1.25	14.07	8.04	-3716	-690	0.0000	0.00	0.000
12	1.38	14.07	8.04	-3844	-892	0.0000	0.00	0.000
13	1.50	14.07	8.04	-3974	-1129	0.0000	0.00	0.000
14	1.63	14.07	8.04	-4106	-1401	0.0000	0.00	0.000
15	1.75	14.07	8.04	-4241	-1710	0.0000	0.00	0.000
16	1.88	14.07	8.04	-4377	-2059	0.0000	0.00	0.000
17	2.00	28.15	16.08	-5101	-2450	0.0000	0.00	0.000
18	2.13	14.07	8.04	-4656	-2883	0.0000	0.00	0.000
19	2.25	14.07	8.04	-4798	-3360	0.0000	0.00	0.000
20	2.38	14.07	8.04	-4943	-3884	0.0000	0.00	0.000
21	2.50	14.07	8.04	-5090	-4456	0.0000	0.00	0.000

Verifica fessurazione fondazione

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	-1.06	8.04	8.04	-4193	-14	0.0000	0.00	0.000
2	-0.99	8.04	8.04	4193	197	0.0000	0.00	0.000
3	-0.93	8.04	8.04	4193	319	0.0000	0.00	0.000
4	-0.86	8.04	8.04	4193	494	0.0000	0.00	0.000
5	-0.79	8.04	8.04	4193	699	0.0000	0.00	0.000
6	-0.73	8.04	8.04	4193	915	0.0000	0.00	0.000
7	-0.66	8.04	8.04	4193	1213	0.0000	0.00	0.000
8	-0.60	8.04	8.04	4193	1781	0.0000	0.00	0.000
9	-0.55	8.04	8.04	4193	2487	0.0000	0.00	0.000
10	-0.49	8.04	8.04	4193	3354	0.0000	0.00	0.000
11	-0.43	8.04	10.05	4267	4408	0.0367	146.68	0.092
12	0.00	8.04	8.04	-4193	-2054	0.0000	0.00	0.000
13	0.04	8.04	8.04	-4193	-1858	0.0000	0.00	0.000
14	0.11	8.04	8.04	-4193	-1557	0.0000	0.00	0.000
15	0.17	8.04	8.04	-4193	-1284	0.0000	0.00	0.000
16	0.24	8.04	8.04	-4193	-1037	0.0000	0.00	0.000
17	0.31	8.04	8.04	-4193	-816	0.0000	0.00	0.000
18	0.37	8.04	8.04	-4193	-621	0.0000	0.00	0.000
19	0.44	8.04	8.04	-4193	-453	0.0000	0.00	0.000
20	0.51	8.04	8.04	-4193	-311	0.0000	0.00	0.000
21	0.57	8.04	8.04	-4193	-203	0.0000	0.00	0.000
22	0.64	8.04	8.04	-4193	-118	0.0000	0.00	0.000
23	0.71	8.04	8.04	-4193	-56	0.0000	0.00	0.000
24	0.77	8.04	8.04	-4193	-16	0.0000	0.00	0.000
25	0.84	8.04	8.04	4193	2	0.0000	0.00	0.000

Analisi dei pali

Combinazione n° 21

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	7392.4
Verticale	[kg]	10294.0
Momento	[kgm]	-5130.8

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.23528
Verticale	[cm]	0.00524
Rotazione	[°]	-0.00493

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]
1	32	896	6824	0
2	33	17848	6824	0

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 21

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
A _f	area di armatura espressa in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cm ²]
σ _f	tensione nell'acciaio espressa in [kg/cm ²]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cm ²]
σ _{stf}	tensione nelle staffe espressa in [kg/cm ²]

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _f	σ _c	σ _f
1	0.00	0	896	6824	52.28	0.15	2.31
2	0.23	-1535	1177	6783	52.28	4.68	116.41
3	0.45	-3062	1456	6746	52.28	9.36	251.18
4	0.68	-4580	1732	6712	52.28	14.02	385.35
5	0.90	-6090	2005	5515	52.28	18.65	518.90
6	1.13	-7331	2276	4426	52.28	22.45	627.65
7	1.35	-8327	2543	3442	52.28	25.51	713.83
8	1.57	-9101	2807	2556	52.28	27.88	779.61
9	1.80	-9676	3069	1765	52.28	29.64	827.04
10	2.02	-10073	3328	1063	52.28	30.85	858.09
11	2.25	-10312	3584	445	52.28	31.58	874.62
12	2.48	-10412	3837	-96	52.28	31.88	878.37
13	2.70	-10391	4087	-564	52.28	31.81	870.95
14	2.93	-10264	4335	-966	52.28	31.41	853.86
15	3.15	-10046	4580	-1307	52.28	30.73	828.51
16	3.38	-9752	4821	-1593	52.28	29.82	796.15
17	3.60	-9394	5060	-1829	52.28	28.71	757.93
18	3.83	-8982	5296	-2020	52.28	27.43	714.92
19	4.05	-8528	5530	-2171	52.28	26.02	668.04
20	4.28	-8039	5760	-2287	52.28	24.51	618.13
21	4.50	-7525	5988	-2372	52.28	22.91	565.94
22	4.73	-6991	6213	-2431	52.28	21.25	512.14
23	4.95	-6444	6435	-2467	52.28	19.54	457.31
24	5.17	-5889	6654	-2484	52.28	17.80	401.96
25	5.40	-5330	6870	-2484	52.28	16.05	346.56
26	5.63	-4771	7083	-2472	52.28	14.29	291.54
27	5.85	-4215	7294	-2449	52.28	12.53	237.38
28	6.08	-3664	7502	-2418	52.28	10.77	184.58
29	6.30	-3119	7776	-2253	52.28	9.02	132.79
30	6.53	-2612	8059	-2068	52.28	7.38	89.41
31	6.75	-2147	8341	-1870	52.28	5.93	73.93
32	6.98	-1726	8624	-1664	52.28	4.73	60.81
33	7.20	-1352	8907	-1455	52.28	3.86	50.94
34	7.42	-1024	9190	-1246	52.28	3.28	44.20
35	7.65	-744	9472	-1039	52.28	2.86	39.32

36	7.88	-510	9755	-836	52.28	2.52	35.38
37	8.10	-322	10038	-638	52.28	2.26	32.35
38	8.33	-179	10321	-447	52.28	2.07	30.22
39	8.55	-78	10603	-263	52.28	1.95	28.94
40	8.78	-19	10886	-85	52.28	1.91	28.48
41	9.00	0	11169	-85	52.28	1.92	28.83

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	σ _c	σ _r
1	0.00	0	17848	6824	52.28	3.07	46.07
2	0.23	-1535	18127	6783	52.28	5.66	77.47
3	0.45	-3062	18400	6746	52.28	8.56	112.15
4	0.68	-4580	18667	6712	52.28	12.59	158.07
5	0.90	-6090	18927	5515	52.28	17.20	208.44
6	1.13	-7331	19180	4426	52.28	21.09	297.05
7	1.35	-8327	19426	3442	52.28	24.22	377.18
8	1.57	-9101	19665	2556	52.28	26.64	439.91
9	1.80	-9676	19897	1765	52.28	28.44	485.98
10	2.02	-10073	20123	1063	52.28	29.67	516.76
11	2.25	-10312	20342	445	52.28	30.40	533.81
12	2.48	-10412	20554	-96	52.28	30.69	538.72
13	2.70	-10391	20759	-564	52.28	30.60	533.02
14	2.93	-10264	20958	-966	52.28	30.18	518.21
15	3.15	-10046	21150	-1307	52.28	29.47	495.67
16	3.38	-9752	21334	-1593	52.28	28.52	466.71
17	3.60	-9394	21513	-1829	52.28	27.37	432.55
18	3.83	-8982	21684	-2020	52.28	26.05	394.34
19	4.05	-8528	21849	-2171	52.28	24.59	353.18
20	4.28	-8039	22006	-2287	52.28	23.02	310.09
21	4.50	-7525	22157	-2372	52.28	21.38	266.11
22	4.73	-6991	22302	-2431	52.28	19.69	239.40
23	4.95	-6444	22439	-2467	52.28	17.97	221.08
24	5.17	-5889	22570	-2484	52.28	16.27	202.65
25	5.40	-5330	22694	-2484	52.28	14.62	184.49
26	5.63	-4771	22811	-2472	52.28	13.05	167.03
27	5.85	-4215	22921	-2449	52.28	11.61	150.72
28	6.08	-3664	23025	-2418	52.28	10.33	135.95
29	6.30	-3119	23287	-2253	52.28	9.25	123.30
30	6.53	-2612	23570	-2068	52.28	8.38	113.07
31	6.75	-2147	23853	-1870	52.28	7.66	104.48
32	6.98	-1726	24136	-1664	52.28	7.01	96.80
33	7.20	-1352	24418	-1455	52.28	6.44	90.05
34	7.42	-1024	24701	-1246	52.28	5.95	84.23
35	7.65	-744	24984	-1039	52.28	5.53	79.36
36	7.88	-510	25266	-836	52.28	5.19	75.42
37	8.10	-322	25549	-638	52.28	4.93	72.40
38	8.33	-179	25832	-447	52.28	4.74	70.26
39	8.55	-78	26115	-263	52.28	4.62	68.98
40	8.78	-19	26397	-85	52.28	4.57	68.53
41	9.00	0	26680	-85	52.28	4.59	68.87

COMBINAZIONE n° 22

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	728.03	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	44.05	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	343.73	[kg]		
Inerzia verticale del muro	-171.86	[kg]		
Inerzia del terrapieno fondazione di monte	336.30	[kg]		
Inerzia verticale del terrapieno fondazione di monte	-168.15	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	6945.02	[kg]
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Risultante dei carichi applicati in dir. verticale	9502.48	[kg]
Sforzo normale sul piano di posa della fondazione	9502.48	[kg]
Sforzo tangenziale sul piano di posa della fondazione	6945.02	[kg]
Eccentricità rispetto al baricentro della fondazione	0.50	[m]
Lunghezza fondazione reagente	1.35	[m]
Risultante in fondazione	11769.89	[kg]
Inclinazione della risultante (rispetto alla normale)	36.16	[°]
Momento rispetto al baricentro della fondazione	4752.69	[kgm]

Sollecitazioni paramento

Combinazione n° 22

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	2.57	45.69
3	0.25	191.59	11.32	103.99
4	0.38	290.45	27.84	174.92
5	0.50	391.36	53.69	258.82
6	0.63	494.32	91.19	371.87
7	0.75	599.32	145.33	529.43
8	0.88	706.36	220.58	712.03
9	1.00	815.45	319.48	913.42
10	1.13	926.58	444.31	1132.37
11	1.25	1039.77	597.19	1367.95
12	1.38	1154.99	780.14	1619.45
13	1.50	1272.26	995.12	1886.32
14	1.63	1391.58	1244.00	2168.11
15	1.75	1512.94	1528.62	2464.46
16	1.88	1636.35	1850.78	2775.08
17	2.00	1761.80	2212.24	3099.74
18	2.13	1889.30	2614.74	3438.23
19	2.25	2018.84	3059.98	3790.41
20	2.38	2150.43	3549.66	4156.13
21	2.50	2284.06	4085.40	4533.17

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 22

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-12.80	2.51	-972.86	1852.87
2	0.07	-107.31	181.77	0.00	1806.16
3	0.13	-95.44	293.94	0.00	2398.79
4	0.20	0.00	455.27	0.00	4108.35
5	0.27	0.00	643.38	0.00	5821.80
6	0.33	0.00	841.94	0.00	7618.00
7	0.40	0.00	1115.55	0.00	9570.38
8	0.46	0.00	1638.83	-279.54	11596.62
9	0.52	0.00	2289.28	-1004.39	13830.19
10	0.57	0.00	3089.00	-2363.03	16257.37
11	0.63	0.00	4060.66	-2406.28	18031.45
12	1.06	-2056.23	0.00	-5006.92	0.00
13	1.10	-1859.93	0.00	-4772.01	0.00
14	1.17	-1559.31	0.00	-4335.33	0.00
15	1.23	-1286.25	0.00	-3928.28	0.00
16	1.30	-1039.09	0.00	-3529.03	0.00
17	1.37	-818.09	0.00	-3131.43	0.00
18	1.43	-623.38	0.00	-2734.98	0.00
19	1.50	-454.97	0.00	-2339.39	0.00
20	1.57	-312.88	0.00	-1944.52	0.00
21	1.63	-203.76	0.00	-1550.33	0.00
22	1.70	-118.03	0.00	-1156.81	0.00
23	1.77	-55.36	0.00	-764.05	0.00
24	1.83	-15.50	0.00	-417.41	0.00
25	1.90	0.00	2.21	-93.32	27.15

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-776.11	39.61	-858.81	308.75
2	0.13	-724.98	37.18	-2622.65	1748.75
3	0.27	-529.72	28.94	-4296.30	3709.73
4	0.40	-103.26	27.82	-4338.60	5081.07
5	0.50	-8.61	275.76	-4365.57	3491.32
6	0.63	-28.07	525.72	-3267.82	2026.72
7	0.77	-39.94	637.14	-1924.88	968.03
8	0.90	-43.53	663.62	-648.89	648.89
9	1.03	-39.94	637.14	-968.03	1924.88
10	1.17	-28.07	525.72	-2026.72	3267.82
11	1.30	-8.61	275.76	-3491.32	4365.57
12	1.40	-103.26	27.82	-5081.07	4338.60
13	1.53	-529.72	28.94	-3709.73	4296.30
14	1.67	-724.98	37.18	-1748.75	2622.65
15	1.80	-776.11	39.61	-858.81	858.81
16	1.93	-724.98	37.18	-2622.65	1748.75
17	2.07	-529.72	28.94	-4296.30	3709.73
18	2.20	-103.26	27.82	-4338.60	5081.07
19	2.30	-8.61	275.76	-4365.57	3491.32
20	2.43	-28.07	525.72	-3267.82	2026.72
21	2.57	-39.94	637.14	-1924.88	968.03
22	2.70	-43.53	663.62	-648.89	648.89
23	2.83	-39.94	637.14	-968.03	1924.88
24	2.97	-28.07	525.72	-2026.72	3267.82
25	3.10	-8.61	275.76	-3491.32	4365.57
26	3.20	-103.26	27.82	-5081.07	4338.60
27	3.33	-529.72	28.94	-3709.73	4296.30
28	3.47	-724.98	37.18	-1748.75	2622.65
29	3.60	-776.11	39.61	-858.81	858.81
30	3.73	-724.98	37.18	-2622.65	1748.75
31	3.87	-529.72	28.94	-4296.30	3709.73
32	4.00	-103.26	27.82	-4338.60	5081.07
33	4.10	-8.61	275.76	-4365.57	3491.32

34	4.23	-28.07	525.72	-3267.82	2026.72
35	4.37	-39.94	637.14	-1924.88	968.03
36	4.50	-43.53	663.62	-648.89	648.89
37	4.63	-39.94	637.14	-968.03	1924.88
38	4.77	-28.07	525.72	-2026.72	3267.82
39	4.90	-8.61	275.76	-3491.32	4365.57
40	5.00	-103.26	27.82	-5081.07	4338.60
41	5.13	-529.72	28.94	-3709.73	4296.30
42	5.27	-724.98	37.18	-1748.75	2622.65
43	5.40	-776.11	39.61	-858.81	858.81
44	5.53	-724.98	37.18	-2622.65	1748.75
45	5.67	-529.72	28.94	-4296.30	3709.73
46	5.80	-103.26	27.82	-4338.60	5081.07
47	5.90	-8.61	275.76	-4365.57	3491.32
48	6.03	-28.07	525.72	-3267.82	2026.72
49	6.17	-39.94	637.14	-1924.88	968.03
50	6.30	-43.53	663.62	-648.89	648.89
51	6.43	-39.94	637.14	-968.03	1924.88
52	6.57	-28.07	525.72	-2026.72	3267.82
53	6.70	-8.61	275.76	-3491.32	4365.57
54	6.80	-103.26	27.82	-5081.07	4338.60
55	6.93	-529.72	28.94	-3709.73	4296.30
56	7.07	-724.98	37.18	-1748.75	2622.65
57	7.20	-776.11	39.61	-858.81	858.81
58	7.33	-724.98	37.18	-2622.65	1748.75
59	7.47	-529.72	28.94	-4296.30	3709.73
60	7.60	-103.26	27.82	-4338.60	5081.07
61	7.70	-8.61	275.76	-4365.57	3491.32
62	7.83	-28.07	525.72	-3267.82	2026.72
63	7.97	-39.94	637.14	-1924.88	968.03
64	8.10	-43.53	663.62	-648.89	648.89
65	8.23	-39.94	637.14	-968.03	1924.88
66	8.37	-28.07	525.72	-2026.72	3267.82
67	8.50	-8.61	275.76	-3491.32	4365.57
68	8.60	-103.26	27.82	-5081.07	4338.60
69	8.73	-529.72	28.94	-3709.73	4296.30
70	8.87	-724.98	37.18	-1748.75	2622.65
71	9.00	-776.11	39.61	-858.81	858.81
72	9.13	-724.98	37.18	-2622.65	1748.75
73	9.27	-529.72	28.94	-4296.30	3709.73
74	9.40	-103.26	27.82	-4338.60	5081.07
75	9.50	-8.61	275.76	-4365.57	3491.32
76	9.63	-28.07	525.72	-3267.82	2026.72
77	9.77	-39.94	637.14	-1924.88	968.03
78	9.90	-43.53	663.62	-648.89	648.89
79	10.03	-39.94	637.14	-968.03	1924.88
80	10.17	-28.07	525.72	-2026.72	3267.82
81	10.30	-8.61	275.76	-3491.32	4365.57
82	10.40	-103.26	27.82	-5081.07	4338.60
83	10.53	-529.72	28.94	-3709.73	4296.30
84	10.67	-724.98	37.18	-1748.75	2622.65
85	10.80	-776.11	39.61	-858.81	858.81
86	10.93	-724.98	37.18	-2622.65	1748.75
87	11.07	-529.72	28.94	-4296.30	3709.73
88	11.20	-103.26	27.82	-4338.60	5081.07
89	11.30	-8.61	275.76	-4365.57	3491.32
90	11.43	-28.07	525.72	-3267.82	2026.72
91	11.57	-39.94	637.14	-1924.88	968.03
92	11.70	-43.53	663.62	-648.89	648.89
93	11.83	-39.94	637.14	-968.03	1924.88
94	11.97	-28.07	525.72	-2026.72	3267.82
95	12.10	-8.61	275.76	-3491.32	4365.57
96	12.20	-103.26	27.82	-5081.07	4338.60
97	12.33	-529.72	28.94	-3709.73	4296.30
98	12.47	-724.98	37.18	-1748.75	2622.65
99	12.60	-776.11	39.61	-858.81	858.81
100	12.73	-724.98	37.18	-2622.65	1748.75
101	12.87	-529.72	28.94	-4296.30	3709.73
102	13.00	-103.26	27.82	-4338.60	5081.07
103	13.10	-8.61	275.76	-4365.57	3491.32
104	13.23	-28.07	525.72	-3267.82	2026.72
105	13.37	-39.94	637.14	-1924.88	968.03
106	13.50	-43.53	663.62	-648.89	648.89
107	13.63	-39.94	637.14	-968.03	1924.88
108	13.77	-28.07	525.72	-2026.72	3267.82
109	13.90	-8.61	275.76	-3491.32	4365.57
110	14.00	-103.26	27.82	-5081.07	4338.60

111	14.13	-529.72	28.94	-3709.73	4296.30
112	14.27	-724.98	37.18	-1748.75	2622.65
113	14.40	-776.11	39.61	-858.81	858.81
114	14.53	-724.98	37.18	-2622.65	1748.75
115	14.67	-529.72	28.94	-4296.30	3709.73
116	14.80	-103.26	27.82	-4338.60	5081.07
117	14.90	-8.61	275.76	-4365.57	3491.32
118	15.03	-28.07	525.72	-3267.82	2026.72
119	15.17	-39.94	637.14	-1924.88	968.03
120	15.30	-43.53	663.62	-648.89	648.89
121	15.43	-39.94	637.14	-968.03	1924.88
122	15.57	-28.07	525.72	-2026.72	3267.82
123	15.70	-8.61	275.76	-3491.32	4365.57
124	15.80	-103.26	27.82	-5081.07	4338.60
125	15.93	-529.72	28.94	-3709.73	4296.30
126	16.07	-724.98	37.18	-1748.75	2622.65
127	16.20	-776.11	39.61	-858.81	858.81
128	16.33	-724.98	37.18	-2622.65	1748.75
129	16.47	-529.72	28.94	-4296.30	3709.73
130	16.60	-103.26	27.82	-4338.60	5081.07
131	16.70	-8.61	275.76	-4365.57	3491.32
132	16.83	-28.07	525.72	-3267.82	2026.72
133	16.97	-39.94	637.14	-1924.88	968.03
134	17.10	-43.53	663.62	-648.89	648.89
135	17.23	-39.94	637.14	-968.03	1924.88
136	17.37	-28.07	525.72	-2026.72	3267.82
137	17.50	-8.61	275.76	-3491.32	4365.57
138	17.60	-103.26	27.82	-5081.07	4338.60
139	17.73	-529.72	28.94	-3709.73	4296.30
140	17.87	-724.98	37.18	-1748.75	2622.65
141	18.00	-776.11	39.61	-858.81	858.81
142	18.13	-724.98	37.18	-2622.65	1748.75
143	18.27	-529.72	28.94	-4296.30	3709.73
144	18.40	-103.26	27.82	-4338.60	5081.07
145	18.50	-8.61	275.76	-4365.57	3491.32
146	18.63	-28.07	525.72	-3267.82	2026.72
147	18.77	-39.94	637.14	-1924.88	968.03
148	18.90	-43.53	663.62	-648.89	648.89
149	19.03	-39.94	637.14	-968.03	1924.88
150	19.17	-28.07	525.72	-2026.72	3267.82
151	19.30	-8.61	275.76	-3491.32	4365.57
152	19.40	-103.26	27.82	-5081.07	4338.60
153	19.53	-529.72	28.94	-3709.73	4296.30
154	19.67	-724.98	37.18	-1748.75	2622.65
155	19.80	-776.11	39.61	-858.81	858.81
156	19.93	-724.98	37.18	-2622.65	1748.75
157	20.07	-529.72	28.94	-4296.30	3709.73
158	20.20	-103.26	27.82	-4338.60	5081.07
159	20.30	-8.61	275.76	-4365.57	3491.32
160	20.43	-28.07	525.72	-3267.82	2026.72
161	20.57	-39.94	637.14	-1924.88	968.03
162	20.70	-43.53	663.62	-648.89	648.89
163	20.83	-39.94	637.14	-968.03	1924.88
164	20.97	-28.07	525.72	-2026.72	3267.82
165	21.10	-8.61	275.76	-3491.32	4365.57
166	21.20	-103.26	27.82	-5081.07	4338.60
167	21.33	-529.72	28.93	-3709.73	4296.30
168	21.47	-724.98	37.18	-1748.75	2622.65
169	21.60	-776.11	39.61	-858.81	858.81
170	21.73	-724.98	37.18	-2622.65	1748.75
171	21.87	-529.72	28.93	-4296.30	3709.73
172	22.00	-103.26	27.82	-4338.60	5081.07
173	22.10	-8.61	275.76	-4365.57	3491.32
174	22.23	-28.07	525.72	-3267.82	2026.72
175	22.37	-39.94	637.14	-1924.88	968.03
176	22.50	-43.54	663.62	-648.89	648.89
177	22.63	-39.94	637.14	-968.03	1924.87
178	22.77	-28.07	525.72	-2026.72	3267.82
179	22.90	-8.62	275.76	-3491.32	4365.57
180	23.00	-103.26	27.82	-5081.07	4338.60
181	23.13	-529.72	28.93	-3709.73	4296.29
182	23.27	-724.98	37.17	-1748.75	2622.64
183	23.40	-776.11	39.59	-858.82	858.81
184	23.53	-724.98	37.16	-2622.65	1748.73
185	23.67	-529.73	28.92	-4296.31	3709.71
186	23.80	-103.26	27.82	-4338.61	5081.07
187	23.90	-8.64	275.76	-4365.58	3491.31

188	24.03	-28.10	525.71	-3267.83	2026.71
189	24.17	-39.98	637.14	-1924.89	968.02
190	24.30	-43.58	663.61	-648.91	648.86
191	24.43	-40.00	637.13	-968.06	1924.84
192	24.57	-28.14	525.70	-2026.75	3267.77
193	24.70	-8.70	275.74	-3491.37	4365.51
194	24.80	-103.27	27.82	-5081.20	4338.54
195	24.93	-529.75	28.81	-3709.61	4296.21
196	25.07	-725.02	37.03	-1748.64	2622.54
197	25.20	-776.15	39.43	-858.99	858.67
198	25.33	-725.04	36.97	-2622.87	1748.11
199	25.47	-529.80	28.68	-4296.59	3709.15
200	25.60	-103.34	27.82	-4338.94	5081.10
201	25.70	-8.99	275.63	-4365.92	3491.06
202	25.83	-28.52	525.55	-3268.25	2026.38
203	25.97	-40.48	636.94	-1925.44	967.62
204	26.10	-44.18	663.36	-649.62	647.93
205	26.23	-40.70	636.81	-968.86	1923.67
206	26.37	-29.01	525.29	-2027.70	3266.25
207	26.50	-9.78	275.19	-3492.72	4363.64
208	26.60	-103.83	27.81	-5084.95	4336.68
209	26.73	-530.63	27.30	-3706.03	4293.76
210	26.87	-726.14	35.20	-1745.34	2619.39
211	27.00	-777.60	37.27	-864.20	854.62
212	27.13	-726.81	34.33	-2629.57	1729.32
213	27.27	-532.11	25.43	-4305.36	3692.01
214	27.40	-105.84	27.79	-4349.15	5082.18
215	27.50	-13.80	271.76	-4376.16	3483.44
216	27.63	-34.23	520.73	-3280.98	2016.54
217	27.77	-47.37	630.76	-1941.92	955.64
218	27.90	-52.49	655.80	-670.97	620.20
219	28.03	-50.52	627.04	-993.98	1888.98
220	28.17	-40.71	512.47	-2058.22	3221.66
221	28.30	-23.67	257.98	-3537.16	4309.42
222	28.40	-120.96	27.73	-5210.09	4282.74
223	28.53	-558.56	10.77	-3618.65	4222.78
224	28.67	-762.80	18.10	-1710.61	2528.36
225	28.80	-826.30	21.10	-1018.73	736.72
226	28.93	-788.86	21.52	-2838.43	1127.48
227	29.07	-616.14	20.54	-4594.28	3122.76
228	29.20	-218.34	24.06	-4568.89	5080.61
229	29.33	0.00	194.30	-4600.08	2887.83
230	29.47	0.00	354.07	-3563.37	1315.28
231	29.60	0.00	384.91	-2565.84	347.30
232	29.73	-0.13	341.58	-1887.29	9.76
233	29.87	-18.76	270.40	-1781.76	108.30
234	30.00	-28.91	8.75	-1814.37	103.16

Armature e tensioni nei materiali del muro

Combinazione n° 22

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta sul lembo di monte in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta sul lembo di valle in [kg/cmq]

Nr.	Y	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fs}	σ _{fi}
1	0.00	100, 30	10.05	8.04	0.00	0.00	0.00	0.00
2	0.13	100, 31	10.05	8.04	0.04	0.02	-0.25	-0.60
3	0.25	100, 31	10.05	8.04	0.12	0.04	-0.12	-1.58
4	0.38	100, 32	10.05	8.04	0.24	0.07	1.02	-3.16
5	0.50	100, 33	10.05	8.04	0.45	0.10	4.73	-5.61
6	0.63	100, 33	14.07	8.04	0.70	0.14	9.55	-8.57
7	0.75	100, 34	14.07	8.04	1.08	0.20	19.05	-12.75
8	0.88	100, 35	14.07	8.04	1.57	0.27	33.22	-18.15
9	1.00	100, 35	14.07	8.04	2.18	0.33	52.39	-24.82
10	1.13	100, 36	14.07	8.04	2.92	0.40	76.75	-32.78
11	1.25	100, 37	14.07	8.04	3.78	0.48	106.47	-42.06
12	1.38	100, 37	14.07	8.04	4.76	0.56	141.68	-52.68

13	1.50	100, 38	14.07	8.04	5.86	0.64	182.48	-64.63
14	1.63	100, 39	14.07	8.04	7.08	0.72	228.95	-77.93
15	1.75	100, 39	14.07	8.04	8.43	0.80	281.16	-92.58
16	1.88	100, 40	14.07	8.04	9.88	0.89	339.16	-108.56
17	2.00	100, 40	28.15	16.08	8.44	0.97	207.34	-99.82
18	2.13	100, 41	14.07	8.04	13.15	1.06	472.70	-144.51
19	2.25	100, 42	14.07	8.04	14.95	1.15	548.30	-164.45
20	2.38	100, 42	14.07	8.04	16.85	1.24	629.82	-185.68
21	2.50	100, 43	14.07	8.04	18.87	1.33	717.26	-208.19

Armature e tensioni nei materiali della fondazione

Combinazione n° 22

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta in corrispondenza del lembo inferiore in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta in corrispondenza del lembo superiore in [kg/cmq]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.08	0.20	0.91	4.63
2	0.07	100, 40	8.04	8.04	1.15	0.25	65.77	38.83
3	0.13	100, 40	8.04	8.04	1.86	0.56	106.36	34.53
4	0.20	100, 40	8.04	8.04	2.89	0.85	164.74	-26.45
5	0.27	100, 40	8.04	8.04	4.08	1.14	232.80	-37.37
6	0.33	100, 40	8.04	8.04	5.34	1.42	304.65	-48.91
7	0.40	100, 40	8.04	8.04	7.08	1.71	403.65	-64.80
8	0.46	100, 40	8.04	8.04	10.39	1.96	593.00	-95.20
9	0.52	100, 40	8.04	8.04	14.52	2.20	828.36	-132.98
10	0.57	100, 40	8.04	8.04	19.59	2.45	1117.73	-179.43
11	0.63	100, 40	8.04	10.05	23.60	2.68	1183.29	-229.31

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.01	-0.02	0.80	-0.13
2	0.07	100, 40	8.04	8.04	0.10	-0.11	-0.90	5.61
3	0.13	100, 40	8.04	8.04	0.35	-0.23	-3.22	20.03
4	0.20	100, 40	8.04	8.04	0.75	-0.34	-6.86	42.71
5	0.27	100, 40	8.04	8.04	1.29	-0.45	-11.84	73.73
6	0.33	100, 40	8.04	8.04	1.98	-0.57	-18.17	113.21
7	0.40	100, 40	8.04	8.04	2.89	-0.68	-26.43	164.63
8	0.47	100, 40	8.04	8.04	3.95	-0.79	-36.21	225.56
9	0.53	100, 40	8.04	8.04	5.19	-0.91	-47.52	296.02
10	0.60	100, 40	8.04	8.04	6.59	-1.02	-60.36	375.99
11	0.67	100, 40	8.04	8.04	8.16	-1.13	-74.72	465.42
12	0.73	100, 40	8.04	8.04	9.89	-1.25	-90.58	564.23
13	0.80	100, 40	8.04	8.04	11.80	-1.36	-108.04	673.00
14	0.84	100, 40	8.04	8.04	13.04	-1.43	-119.44	744.03

Armature e tensioni piastre

Combinazione n° 22

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	-2.54	39.76	0.42	0.01
2	0.13	2.83	2.83	-2.38	37.32	0.39	0.01
3	0.27	2.83	2.83	-1.85	29.04	0.31	0.02

4	0.40	2.83	2.83	1.30	12.73	0.13	-0.03
5	0.50	2.83	2.83	8.64	0.61	0.09	-0.04
6	0.63	2.83	2.83	28.17	-1.80	0.30	-0.03
7	0.77	2.83	2.83	40.09	-2.56	0.42	-0.02
8	0.90	2.83	2.83	43.69	-2.79	0.46	0.01
9	1.03	2.83	2.83	40.09	-2.56	0.42	0.02
10	1.17	2.83	2.83	28.17	-1.80	0.30	0.03
11	1.30	2.83	2.83	8.64	0.61	0.09	0.04
12	1.40	2.83	2.83	1.30	12.73	0.13	0.03
13	1.53	2.83	2.83	-1.85	29.04	0.31	-0.02
14	1.67	2.83	2.83	-2.38	37.32	0.39	-0.01
15	1.80	2.83	2.83	-2.54	39.76	0.42	0.01
16	1.93	2.83	2.83	-2.38	37.32	0.39	0.01
17	2.07	2.83	2.83	-1.85	29.04	0.31	0.02
18	2.20	2.83	2.83	1.30	12.73	0.13	-0.03
19	2.30	2.83	2.83	8.64	0.61	0.09	-0.04
20	2.43	2.83	2.83	28.17	-1.80	0.30	-0.03
21	2.57	2.83	2.83	40.09	-2.56	0.42	-0.02
22	2.70	2.83	2.83	43.69	-2.79	0.46	0.01
23	2.83	2.83	2.83	40.09	-2.56	0.42	0.02
24	2.97	2.83	2.83	28.17	-1.80	0.30	0.03
25	3.10	2.83	2.83	8.64	0.61	0.09	0.04
26	3.20	2.83	2.83	1.30	12.73	0.13	0.03
27	3.33	2.83	2.83	-1.85	29.04	0.31	-0.02
28	3.47	2.83	2.83	-2.38	37.32	0.39	-0.01
29	3.60	2.83	2.83	-2.54	39.76	0.42	0.01
30	3.73	2.83	2.83	-2.38	37.32	0.39	0.01
31	3.87	2.83	2.83	-1.85	29.04	0.31	0.02
32	4.00	2.83	2.83	1.30	12.73	0.13	-0.03
33	4.10	2.83	2.83	8.64	0.61	0.09	-0.04
34	4.23	2.83	2.83	28.17	-1.80	0.30	-0.03
35	4.37	2.83	2.83	40.09	-2.56	0.42	-0.02
36	4.50	2.83	2.83	43.69	-2.79	0.46	0.01
37	4.63	2.83	2.83	40.09	-2.56	0.42	0.02
38	4.77	2.83	2.83	28.17	-1.80	0.30	0.03
39	4.90	2.83	2.83	8.64	0.61	0.09	0.04
40	5.00	2.83	2.83	1.30	12.73	0.13	0.03
41	5.13	2.83	2.83	-1.85	29.04	0.31	-0.02
42	5.27	2.83	2.83	-2.38	37.32	0.39	-0.01
43	5.40	2.83	2.83	-2.54	39.76	0.42	0.01
44	5.53	2.83	2.83	-2.38	37.32	0.39	0.01
45	5.67	2.83	2.83	-1.85	29.04	0.31	0.02
46	5.80	2.83	2.83	1.30	12.73	0.13	-0.03
47	5.90	2.83	2.83	8.64	0.61	0.09	-0.04
48	6.03	2.83	2.83	28.17	-1.80	0.30	-0.03
49	6.17	2.83	2.83	40.09	-2.56	0.42	-0.02
50	6.30	2.83	2.83	43.69	-2.79	0.46	0.01
51	6.43	2.83	2.83	40.09	-2.56	0.42	0.02
52	6.57	2.83	2.83	28.17	-1.80	0.30	0.03
53	6.70	2.83	2.83	8.64	0.61	0.09	0.04
54	6.80	2.83	2.83	1.30	12.73	0.13	0.03
55	6.93	2.83	2.83	-1.85	29.04	0.31	-0.02
56	7.07	2.83	2.83	-2.38	37.32	0.39	-0.01
57	7.20	2.83	2.83	-2.54	39.76	0.42	0.01
58	7.33	2.83	2.83	-2.38	37.32	0.39	0.01
59	7.47	2.83	2.83	-1.85	29.04	0.31	0.02
60	7.60	2.83	2.83	1.30	12.73	0.13	-0.03
61	7.70	2.83	2.83	8.64	0.61	0.09	-0.04
62	7.83	2.83	2.83	28.17	-1.80	0.30	-0.03
63	7.97	2.83	2.83	40.09	-2.56	0.42	-0.02
64	8.10	2.83	2.83	43.69	-2.79	0.46	-0.01
65	8.23	2.83	2.83	40.09	-2.56	0.42	0.02
66	8.37	2.83	2.83	28.17	-1.80	0.30	0.03
67	8.50	2.83	2.83	8.64	0.61	0.09	0.04
68	8.60	2.83	2.83	1.30	12.73	0.13	0.03
69	8.73	2.83	2.83	-1.85	29.04	0.31	-0.02
70	8.87	2.83	2.83	-2.38	37.32	0.39	-0.01
71	9.00	2.83	2.83	-2.54	39.76	0.42	-0.01
72	9.13	2.83	2.83	-2.38	37.32	0.39	0.01
73	9.27	2.83	2.83	-1.85	29.04	0.31	0.02
74	9.40	2.83	2.83	1.30	12.73	0.13	-0.03
75	9.50	2.83	2.83	8.64	0.61	0.09	-0.04
76	9.63	2.83	2.83	28.17	-1.80	0.30	-0.03
77	9.77	2.83	2.83	40.09	-2.56	0.42	-0.02
78	9.90	2.83	2.83	43.69	-2.79	0.46	-0.01
79	10.03	2.83	2.83	40.09	-2.56	0.42	0.02
80	10.17	2.83	2.83	28.17	-1.80	0.30	0.03

81	10.30	2.83	2.83	8.64	0.61	0.09	0.04
82	10.40	2.83	2.83	1.30	12.73	0.13	0.03
83	10.53	2.83	2.83	-1.85	29.04	0.31	-0.02
84	10.67	2.83	2.83	-2.38	37.32	0.39	-0.01
85	10.80	2.83	2.83	-2.54	39.76	0.42	-0.01
86	10.93	2.83	2.83	-2.38	37.32	0.39	0.01
87	11.07	2.83	2.83	-1.85	29.04	0.31	0.02
88	11.20	2.83	2.83	1.30	12.73	0.13	-0.03
89	11.30	2.83	2.83	8.64	0.61	0.09	-0.04
90	11.43	2.83	2.83	28.17	-1.80	0.30	-0.03
91	11.57	2.83	2.83	40.09	-2.56	0.42	-0.02
92	11.70	2.83	2.83	43.69	-2.79	0.46	-0.01
93	11.83	2.83	2.83	40.09	-2.56	0.42	0.02
94	11.97	2.83	2.83	28.17	-1.80	0.30	0.03
95	12.10	2.83	2.83	8.64	0.61	0.09	0.04
96	12.20	2.83	2.83	1.30	12.73	0.13	0.03
97	12.33	2.83	2.83	-1.85	29.04	0.31	-0.02
98	12.47	2.83	2.83	-2.38	37.32	0.39	-0.01
99	12.60	2.83	2.83	-2.54	39.76	0.42	-0.01
100	12.73	2.83	2.83	-2.38	37.32	0.39	0.01
101	12.87	2.83	2.83	-1.85	29.04	0.31	0.02
102	13.00	2.83	2.83	1.30	12.73	0.13	-0.03
103	13.10	2.83	2.83	8.64	0.61	0.09	-0.04
104	13.23	2.83	2.83	28.17	-1.80	0.30	-0.03
105	13.37	2.83	2.83	40.09	-2.56	0.42	-0.02
106	13.50	2.83	2.83	43.69	-2.79	0.46	-0.01
107	13.63	2.83	2.83	40.09	-2.56	0.42	0.02
108	13.77	2.83	2.83	28.17	-1.80	0.30	0.03
109	13.90	2.83	2.83	8.64	0.61	0.09	0.04
110	14.00	2.83	2.83	1.30	12.73	0.13	0.03
111	14.13	2.83	2.83	-1.85	29.04	0.31	-0.02
112	14.27	2.83	2.83	-2.38	37.32	0.39	-0.01
113	14.40	2.83	2.83	-2.54	39.76	0.42	-0.01
114	14.53	2.83	2.83	-2.38	37.32	0.39	0.01
115	14.67	2.83	2.83	-1.85	29.04	0.31	0.02
116	14.80	2.83	2.83	1.30	12.73	0.13	-0.03
117	14.90	2.83	2.83	8.64	0.61	0.09	-0.04
118	15.03	2.83	2.83	28.17	-1.80	0.30	-0.03
119	15.17	2.83	2.83	40.09	-2.56	0.42	-0.02
120	15.30	2.83	2.83	43.69	-2.79	0.46	-0.01
121	15.43	2.83	2.83	40.09	-2.56	0.42	0.02
122	15.57	2.83	2.83	28.17	-1.80	0.30	0.03
123	15.70	2.83	2.83	8.64	0.61	0.09	0.04
124	15.80	2.83	2.83	1.30	12.73	0.13	0.03
125	15.93	2.83	2.83	-1.85	29.04	0.31	-0.02
126	16.07	2.83	2.83	-2.38	37.32	0.39	-0.01
127	16.20	2.83	2.83	-2.54	39.76	0.42	-0.01
128	16.33	2.83	2.83	-2.38	37.32	0.39	0.01
129	16.47	2.83	2.83	-1.85	29.04	0.31	0.02
130	16.60	2.83	2.83	1.30	12.73	0.13	-0.03
131	16.70	2.83	2.83	8.64	0.61	0.09	-0.04
132	16.83	2.83	2.83	28.17	-1.80	0.30	-0.03
133	16.97	2.83	2.83	40.09	-2.56	0.42	-0.02
134	17.10	2.83	2.83	43.69	-2.79	0.46	-0.01
135	17.23	2.83	2.83	40.09	-2.56	0.42	0.02
136	17.37	2.83	2.83	28.17	-1.80	0.30	0.03
137	17.50	2.83	2.83	8.64	0.61	0.09	0.04
138	17.60	2.83	2.83	1.30	12.73	0.13	0.03
139	17.73	2.83	2.83	-1.85	29.04	0.31	-0.02
140	17.87	2.83	2.83	-2.38	37.32	0.39	-0.01
141	18.00	2.83	2.83	-2.54	39.76	0.42	-0.01
142	18.13	2.83	2.83	-2.38	37.32	0.39	0.01
143	18.27	2.83	2.83	-1.85	29.04	0.31	0.02
144	18.40	2.83	2.83	1.30	12.73	0.13	-0.03
145	18.50	2.83	2.83	8.64	0.61	0.09	-0.04
146	18.63	2.83	2.83	28.17	-1.80	0.30	-0.03
147	18.77	2.83	2.83	40.09	-2.56	0.42	-0.02
148	18.90	2.83	2.83	43.69	-2.79	0.46	-0.01
149	19.03	2.83	2.83	40.09	-2.56	0.42	0.02
150	19.17	2.83	2.83	28.17	-1.80	0.30	0.03
151	19.30	2.83	2.83	8.64	0.61	0.09	0.04
152	19.40	2.83	2.83	1.30	12.73	0.13	0.03
153	19.53	2.83	2.83	-1.85	29.04	0.31	-0.02
154	19.67	2.83	2.83	-2.38	37.32	0.39	-0.01
155	19.80	2.83	2.83	-2.54	39.75	0.42	-0.01
156	19.93	2.83	2.83	-2.38	37.32	0.39	0.01
157	20.07	2.83	2.83	-1.85	29.04	0.31	0.02

158	20.20	2.83	2.83	1.30	12.73	0.13	-0.03
159	20.30	2.83	2.83	8.64	0.61	0.09	-0.04
160	20.43	2.83	2.83	28.17	-1.80	0.30	-0.03
161	20.57	2.83	2.83	40.09	-2.56	0.42	-0.02
162	20.70	2.83	2.83	43.69	-2.79	0.46	-0.01
163	20.83	2.83	2.83	40.09	-2.56	0.42	0.02
164	20.97	2.83	2.83	28.17	-1.80	0.30	0.03
165	21.10	2.83	2.83	8.64	0.61	0.09	0.04
166	21.20	2.83	2.83	1.30	12.73	0.13	0.03
167	21.33	2.83	2.83	-1.85	29.04	0.31	-0.02
168	21.47	2.83	2.83	-2.38	37.32	0.39	-0.01
169	21.60	2.83	2.83	-2.53	39.75	0.42	-0.01
170	21.73	2.83	2.83	-2.38	37.32	0.39	0.01
171	21.87	2.83	2.83	-1.85	29.04	0.31	0.02
172	22.00	2.83	2.83	1.30	12.73	0.13	-0.03
173	22.10	2.83	2.83	8.65	0.61	0.09	-0.04
174	22.23	2.83	2.83	28.18	-1.80	0.30	-0.03
175	22.37	2.83	2.83	40.09	-2.56	0.42	-0.02
176	22.50	2.83	2.83	43.70	-2.79	0.46	-0.01
177	22.63	2.83	2.83	40.09	-2.56	0.42	0.02
178	22.77	2.83	2.83	28.18	-1.80	0.30	0.03
179	22.90	2.83	2.83	8.65	0.61	0.09	0.04
180	23.00	2.83	2.83	1.30	12.73	0.13	0.03
181	23.13	2.83	2.83	-1.85	29.03	0.31	-0.02
182	23.27	2.83	2.83	-2.38	37.31	0.39	-0.01
183	23.40	2.83	2.83	-2.53	39.74	0.42	-0.01
184	23.53	2.83	2.83	-2.38	37.30	0.39	0.01
185	23.67	2.83	2.83	-1.85	29.02	0.30	0.02
186	23.80	2.83	2.83	1.30	12.71	0.13	-0.03
187	23.90	2.83	2.83	8.67	0.61	0.09	-0.04
188	24.03	2.83	2.83	28.21	-1.80	0.30	-0.03
189	24.17	2.83	2.83	40.13	-2.56	0.42	-0.02
190	24.30	2.83	2.83	43.74	-2.79	0.46	-0.01
191	24.43	2.83	2.83	40.14	-2.56	0.42	0.02
192	24.57	2.83	2.83	28.25	-1.80	0.30	0.03
193	24.70	2.83	2.83	8.73	0.61	0.09	0.04
194	24.80	2.83	2.83	1.30	12.64	0.13	0.03
195	24.93	2.83	2.83	-1.84	28.92	0.30	-0.02
196	25.07	2.83	2.83	-2.37	37.17	0.39	-0.01
197	25.20	2.83	2.83	-2.52	39.58	0.42	-0.01
198	25.33	2.83	2.83	-2.37	37.11	0.39	0.01
199	25.47	2.83	2.83	-1.84	28.78	0.30	0.02
200	25.60	2.83	2.83	1.30	12.46	0.13	-0.03
201	25.70	2.83	2.83	9.02	0.61	0.09	-0.04
202	25.83	2.83	2.83	28.62	-1.83	0.30	-0.03
203	25.97	2.83	2.83	40.63	-2.59	0.43	-0.02
204	26.10	2.83	2.83	44.35	-2.83	0.47	-0.01
205	26.23	2.83	2.83	40.86	-2.61	0.43	0.02
206	26.37	2.83	2.83	29.11	-1.86	0.31	0.03
207	26.50	2.83	2.83	9.81	-0.63	0.10	0.04
208	26.60	2.83	2.83	1.30	11.57	0.12	0.03
209	26.73	2.83	2.83	-1.75	27.40	0.29	-0.02
210	26.87	2.83	2.83	-2.25	35.33	0.37	-0.01
211	27.00	2.83	2.83	-2.39	37.40	0.39	-0.01
212	27.13	2.83	2.83	-2.20	34.45	0.36	-0.01
213	27.27	2.83	2.83	-1.63	25.52	0.27	-0.02
214	27.40	2.83	2.83	1.31	9.04	0.10	-0.04
215	27.50	2.83	2.83	13.85	-0.88	0.15	-0.05
216	27.63	2.83	2.83	34.36	-2.19	0.36	-0.04
217	27.77	2.83	2.83	47.55	-3.03	0.50	-0.02
218	27.90	2.83	2.83	52.69	-3.36	0.55	-0.01
219	28.03	2.83	2.83	50.71	-3.23	0.53	-0.02
220	28.17	2.83	2.83	40.86	-2.61	0.43	-0.03
221	28.30	2.83	2.83	23.75	-1.51	0.25	-0.04
222	28.40	2.83	2.83	6.99	3.65	0.07	-0.04
223	28.53	2.83	2.83	-0.69	10.81	0.11	-0.04
224	28.67	2.83	2.83	-1.16	18.16	0.19	-0.03
225	28.80	2.83	2.83	-1.35	21.18	0.22	-0.02
226	28.93	2.83	2.83	-1.38	21.60	0.23	-0.02
227	29.07	2.83	2.83	-1.31	20.61	0.22	-0.01
228	29.20	2.83	2.83	-1.21	19.02	0.20	-0.01
229	29.33	2.83	2.83	-1.11	17.37	0.18	-0.01
230	29.47	2.83	2.83	-1.01	15.88	0.17	-0.01
231	29.60	2.83	2.83	-0.94	14.66	0.15	0.00
232	29.73	2.83	2.83	-0.87	13.66	0.14	0.00
233	29.87	2.83	2.83	1.42	13.02	0.14	0.01
234	30.00	2.83	2.83	-0.56	8.79	0.09	0.01

Piastra fondazione valle

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	779.00	-49.67	8.19	-0.21
2	0.13	2.83	2.83	727.68	-46.40	7.65	-0.34
3	0.27	2.83	2.83	531.70	-33.90	5.59	-0.70
4	0.40	2.83	2.83	103.64	27.92	1.09	0.88
5	0.50	2.83	2.83	-17.65	276.79	2.91	-0.80
6	0.63	2.83	2.83	-33.65	527.68	5.55	-0.59
7	0.77	2.83	2.83	-40.78	639.52	6.72	-0.26
8	0.90	2.83	2.83	-42.47	666.09	7.00	0.12
9	1.03	2.83	2.83	-40.78	639.52	6.72	0.26
10	1.17	2.83	2.83	-33.65	527.68	5.55	0.59
11	1.30	2.83	2.83	-17.65	276.79	2.91	0.80
12	1.40	2.83	2.83	103.64	27.92	1.09	-0.88
13	1.53	2.83	2.83	531.70	-33.90	5.59	0.70
14	1.67	2.83	2.83	727.68	-46.40	7.65	0.34
15	1.80	2.83	2.83	779.00	-49.67	8.19	0.16
16	1.93	2.83	2.83	727.68	-46.40	7.65	-0.34
17	2.07	2.83	2.83	531.70	-33.90	5.59	-0.70
18	2.20	2.83	2.83	103.64	27.92	1.09	0.88
19	2.30	2.83	2.83	-17.65	276.79	2.91	-0.80
20	2.43	2.83	2.83	-33.65	527.68	5.55	-0.59
21	2.57	2.83	2.83	-40.78	639.52	6.72	-0.26
22	2.70	2.83	2.83	-42.47	666.09	7.00	0.12
23	2.83	2.83	2.83	-40.78	639.52	6.72	0.26
24	2.97	2.83	2.83	-33.65	527.68	5.55	0.59
25	3.10	2.83	2.83	-17.65	276.79	2.91	0.80
26	3.20	2.83	2.83	103.64	27.92	1.09	-0.88
27	3.33	2.83	2.83	531.70	-33.90	5.59	0.70
28	3.47	2.83	2.83	727.68	-46.40	7.65	0.34
29	3.60	2.83	2.83	779.00	-49.67	8.19	0.16
30	3.73	2.83	2.83	727.68	-46.40	7.65	-0.34
31	3.87	2.83	2.83	531.70	-33.90	5.59	-0.70
32	4.00	2.83	2.83	103.64	27.92	1.09	0.88
33	4.10	2.83	2.83	-17.65	276.79	2.91	-0.80
34	4.23	2.83	2.83	-33.65	527.68	5.55	-0.59
35	4.37	2.83	2.83	-40.78	639.52	6.72	-0.26
36	4.50	2.83	2.83	-42.47	666.09	7.00	-0.12
37	4.63	2.83	2.83	-40.78	639.52	6.72	0.26
38	4.77	2.83	2.83	-33.65	527.68	5.55	0.59
39	4.90	2.83	2.83	-17.65	276.79	2.91	0.80
40	5.00	2.83	2.83	103.64	27.92	1.09	-0.88
41	5.13	2.83	2.83	531.70	-33.90	5.59	0.70
42	5.27	2.83	2.83	727.68	-46.40	7.65	0.34
43	5.40	2.83	2.83	779.00	-49.67	8.19	-0.16
44	5.53	2.83	2.83	727.68	-46.40	7.65	-0.34
45	5.67	2.83	2.83	531.70	-33.90	5.59	-0.70
46	5.80	2.83	2.83	103.64	27.92	1.09	0.88
47	5.90	2.83	2.83	-17.65	276.79	2.91	-0.80
48	6.03	2.83	2.83	-33.65	527.68	5.55	-0.59
49	6.17	2.83	2.83	-40.78	639.52	6.72	-0.26
50	6.30	2.83	2.83	-42.47	666.09	7.00	-0.12
51	6.43	2.83	2.83	-40.78	639.52	6.72	0.26
52	6.57	2.83	2.83	-33.65	527.68	5.55	0.59
53	6.70	2.83	2.83	-17.65	276.79	2.91	0.80
54	6.80	2.83	2.83	103.64	27.92	1.09	-0.88
55	6.93	2.83	2.83	531.70	-33.90	5.59	0.70
56	7.07	2.83	2.83	727.68	-46.40	7.65	0.34
57	7.20	2.83	2.83	779.00	-49.67	8.19	-0.16
58	7.33	2.83	2.83	727.68	-46.40	7.65	-0.34
59	7.47	2.83	2.83	531.70	-33.90	5.59	-0.70
60	7.60	2.83	2.83	103.64	27.92	1.09	0.88
61	7.70	2.83	2.83	-17.65	276.79	2.91	-0.80
62	7.83	2.83	2.83	-33.65	527.68	5.55	-0.59
63	7.97	2.83	2.83	-40.78	639.52	6.72	-0.26
64	8.10	2.83	2.83	-42.47	666.09	7.00	0.12
65	8.23	2.83	2.83	-40.78	639.52	6.72	0.26
66	8.37	2.83	2.83	-33.65	527.68	5.55	0.59
67	8.50	2.83	2.83	-17.65	276.79	2.91	0.80
68	8.60	2.83	2.83	103.64	27.92	1.09	-0.88
69	8.73	2.83	2.83	531.70	-33.90	5.59	0.70
70	8.87	2.83	2.83	727.68	-46.40	7.65	0.34
71	9.00	2.83	2.83	779.00	-49.67	8.19	0.16
72	9.13	2.83	2.83	727.68	-46.40	7.65	-0.34
73	9.27	2.83	2.83	531.70	-33.90	5.59	-0.70

74	9.40	2.83	2.83	103.64	27.92	1.09	0.88
75	9.50	2.83	2.83	-17.65	276.79	2.91	-0.80
76	9.63	2.83	2.83	-33.65	527.68	5.55	-0.59
77	9.77	2.83	2.83	-40.78	639.52	6.72	-0.26
78	9.90	2.83	2.83	-42.47	666.09	7.00	-0.12
79	10.03	2.83	2.83	-40.78	639.52	6.72	0.26
80	10.17	2.83	2.83	-33.65	527.68	5.55	0.59
81	10.30	2.83	2.83	-17.65	276.79	2.91	0.80
82	10.40	2.83	2.83	103.64	27.92	1.09	-0.88
83	10.53	2.83	2.83	531.70	-33.90	5.59	0.70
84	10.67	2.83	2.83	727.68	-46.40	7.65	0.34
85	10.80	2.83	2.83	779.00	-49.67	8.19	0.16
86	10.93	2.83	2.83	727.68	-46.40	7.65	-0.34
87	11.07	2.83	2.83	531.70	-33.90	5.59	-0.70
88	11.20	2.83	2.83	103.64	27.92	1.09	0.88
89	11.30	2.83	2.83	-17.65	276.79	2.91	-0.80
90	11.43	2.83	2.83	-33.65	527.68	5.55	-0.59
91	11.57	2.83	2.83	-40.78	639.52	6.72	-0.26
92	11.70	2.83	2.83	-42.47	666.09	7.00	0.12
93	11.83	2.83	2.83	-40.78	639.52	6.72	0.26
94	11.97	2.83	2.83	-33.65	527.68	5.55	0.59
95	12.10	2.83	2.83	-17.65	276.79	2.91	0.80
96	12.20	2.83	2.83	103.64	27.92	1.09	-0.88
97	12.33	2.83	2.83	531.70	-33.90	5.59	0.70
98	12.47	2.83	2.83	727.68	-46.40	7.65	0.34
99	12.60	2.83	2.83	779.00	-49.67	8.19	-0.16
100	12.73	2.83	2.83	727.68	-46.40	7.65	-0.34
101	12.87	2.83	2.83	531.70	-33.90	5.59	-0.70
102	13.00	2.83	2.83	103.64	27.92	1.09	0.88
103	13.10	2.83	2.83	-17.65	276.79	2.91	-0.80
104	13.23	2.83	2.83	-33.65	527.68	5.55	-0.59
105	13.37	2.83	2.83	-40.78	639.52	6.72	-0.26
106	13.50	2.83	2.83	-42.47	666.09	7.00	-0.12
107	13.63	2.83	2.83	-40.78	639.52	6.72	0.26
108	13.77	2.83	2.83	-33.65	527.68	5.55	0.59
109	13.90	2.83	2.83	-17.65	276.79	2.91	0.80
110	14.00	2.83	2.83	103.64	27.92	1.09	-0.88
111	14.13	2.83	2.83	531.70	-33.90	5.59	0.70
112	14.27	2.83	2.83	727.68	-46.40	7.65	0.34
113	14.40	2.83	2.83	779.00	-49.67	8.19	-0.16
114	14.53	2.83	2.83	727.68	-46.40	7.65	-0.34
115	14.67	2.83	2.83	531.70	-33.90	5.59	-0.70
116	14.80	2.83	2.83	103.64	27.92	1.09	0.88
117	14.90	2.83	2.83	-17.65	276.79	2.91	-0.80
118	15.03	2.83	2.83	-33.65	527.68	5.55	-0.59
119	15.17	2.83	2.83	-40.78	639.52	6.72	-0.26
120	15.30	2.83	2.83	-42.47	666.09	7.00	-0.12
121	15.43	2.83	2.83	-40.78	639.52	6.72	0.26
122	15.57	2.83	2.83	-33.65	527.68	5.55	0.59
123	15.70	2.83	2.83	-17.65	276.79	2.91	0.80
124	15.80	2.83	2.83	103.64	27.92	1.09	-0.88
125	15.93	2.83	2.83	531.70	-33.90	5.59	0.70
126	16.07	2.83	2.83	727.68	-46.40	7.65	0.34
127	16.20	2.83	2.83	779.00	-49.67	8.19	-0.16
128	16.33	2.83	2.83	727.68	-46.40	7.65	-0.34
129	16.47	2.83	2.83	531.70	-33.90	5.59	-0.70
130	16.60	2.83	2.83	103.64	27.92	1.09	0.88
131	16.70	2.83	2.83	-17.65	276.79	2.91	-0.80
132	16.83	2.83	2.83	-33.65	527.68	5.55	-0.59
133	16.97	2.83	2.83	-40.78	639.52	6.72	-0.26
134	17.10	2.83	2.83	-42.47	666.09	7.00	-0.12
135	17.23	2.83	2.83	-40.78	639.52	6.72	0.26
136	17.37	2.83	2.83	-33.65	527.68	5.55	0.59
137	17.50	2.83	2.83	-17.65	276.79	2.91	0.80
138	17.60	2.83	2.83	103.64	27.92	1.09	-0.88
139	17.73	2.83	2.83	531.70	-33.90	5.59	0.70
140	17.87	2.83	2.83	727.68	-46.40	7.65	0.34
141	18.00	2.83	2.83	779.00	-49.67	8.19	-0.16
142	18.13	2.83	2.83	727.68	-46.40	7.65	-0.34
143	18.27	2.83	2.83	531.70	-33.90	5.59	-0.70
144	18.40	2.83	2.83	103.64	27.92	1.09	0.88
145	18.50	2.83	2.83	-17.65	276.79	2.91	-0.80
146	18.63	2.83	2.83	-33.65	527.68	5.55	-0.59
147	18.77	2.83	2.83	-40.78	639.52	6.72	-0.26
148	18.90	2.83	2.83	-42.47	666.09	7.00	-0.12
149	19.03	2.83	2.83	-40.78	639.52	6.72	0.26
150	19.17	2.83	2.83	-33.65	527.68	5.55	0.59

151	19.30	2.83	2.83	-17.65	276.79	2.91	0.80
152	19.40	2.83	2.83	103.64	27.92	1.09	-0.88
153	19.53	2.83	2.83	531.70	-33.90	5.59	0.70
154	19.67	2.83	2.83	727.68	-46.40	7.65	0.34
155	19.80	2.83	2.83	779.00	-49.67	8.19	-0.16
156	19.93	2.83	2.83	727.68	-46.40	7.65	-0.34
157	20.07	2.83	2.83	531.70	-33.90	5.59	-0.70
158	20.20	2.83	2.83	103.64	27.92	1.09	0.88
159	20.30	2.83	2.83	-17.65	276.79	2.91	-0.80
160	20.43	2.83	2.83	-33.65	527.68	5.55	-0.59
161	20.57	2.83	2.83	-40.78	639.52	6.72	-0.26
162	20.70	2.83	2.83	-42.47	666.09	7.00	-0.12
163	20.83	2.83	2.83	-40.78	639.52	6.72	0.26
164	20.97	2.83	2.83	-33.65	527.68	5.55	0.59
165	21.10	2.83	2.83	-17.65	276.79	2.91	0.80
166	21.20	2.83	2.83	103.64	27.92	1.09	-0.88
167	21.33	2.83	2.83	531.70	-33.90	5.59	0.70
168	21.47	2.83	2.83	727.68	-46.40	7.65	0.34
169	21.60	2.83	2.83	779.00	-49.67	8.19	-0.16
170	21.73	2.83	2.83	727.68	-46.40	7.65	-0.34
171	21.87	2.83	2.83	531.70	-33.90	5.59	-0.70
172	22.00	2.83	2.83	103.64	27.92	1.09	0.88
173	22.10	2.83	2.83	-17.65	276.79	2.91	-0.80
174	22.23	2.83	2.83	-33.65	527.68	5.55	-0.59
175	22.37	2.83	2.83	-40.78	639.52	6.72	-0.26
176	22.50	2.83	2.83	-42.47	666.09	7.00	-0.12
177	22.63	2.83	2.83	-40.78	639.52	6.72	0.26
178	22.77	2.83	2.83	-33.65	527.68	5.55	0.59
179	22.90	2.83	2.83	-17.65	276.79	2.91	0.80
180	23.00	2.83	2.83	103.64	27.92	1.09	-0.88
181	23.13	2.83	2.83	531.70	-33.90	5.59	0.70
182	23.27	2.83	2.83	727.68	-46.40	7.65	0.34
183	23.40	2.83	2.83	779.00	-49.67	8.19	-0.16
184	23.53	2.83	2.83	727.68	-46.40	7.65	-0.34
185	23.67	2.83	2.83	531.70	-33.90	5.59	-0.70
186	23.80	2.83	2.83	103.64	27.92	1.09	0.88
187	23.90	2.83	2.83	-17.65	276.79	2.91	-0.80
188	24.03	2.83	2.83	-33.65	527.67	5.55	-0.59
189	24.17	2.83	2.83	-40.78	639.51	6.72	-0.26
190	24.30	2.83	2.83	-42.47	666.08	7.00	-0.12
191	24.43	2.83	2.83	-40.78	639.51	6.72	0.26
192	24.57	2.83	2.83	-33.65	527.66	5.54	0.59
193	24.70	2.83	2.83	-17.65	276.77	2.91	0.80
194	24.80	2.83	2.83	103.66	27.92	1.09	-0.88
195	24.93	2.83	2.83	531.73	-33.91	5.59	0.70
196	25.07	2.83	2.83	727.72	-46.40	7.65	0.34
197	25.20	2.83	2.83	779.05	-49.68	8.19	-0.16
198	25.33	2.83	2.83	727.74	-46.41	7.65	-0.34
199	25.47	2.83	2.83	531.78	-33.91	5.59	-0.70
200	25.60	2.83	2.83	103.73	27.92	1.09	0.88
201	25.70	2.83	2.83	-17.64	276.66	2.91	-0.80
202	25.83	2.83	2.83	-33.64	527.51	5.54	-0.59
203	25.97	2.83	2.83	-40.77	639.31	6.72	-0.26
204	26.10	2.83	2.83	-42.46	665.83	7.00	-0.12
205	26.23	2.83	2.83	-40.76	639.19	6.72	0.26
206	26.37	2.83	2.83	-33.62	527.24	5.54	0.58
207	26.50	2.83	2.83	-17.61	276.21	2.90	0.80
208	26.60	2.83	2.83	104.21	27.92	1.10	-0.88
209	26.73	2.83	2.83	532.61	-33.96	5.60	0.70
210	26.87	2.83	2.83	728.84	-46.48	7.66	0.34
211	27.00	2.83	2.83	780.50	-49.77	8.20	-0.16
212	27.13	2.83	2.83	729.52	-46.52	7.67	-0.34
213	27.27	2.83	2.83	534.09	-34.06	5.61	-0.70
214	27.40	2.83	2.83	106.24	27.90	1.12	0.88
215	27.50	2.83	2.83	-17.39	272.78	2.87	-0.80
216	27.63	2.83	2.83	-33.33	522.67	5.49	-0.59
217	27.77	2.83	2.83	-40.37	633.11	6.65	-0.27
218	27.90	2.83	2.83	-41.97	658.25	6.92	-0.12
219	28.03	2.83	2.83	-40.13	629.38	6.61	0.29
220	28.17	2.83	2.83	-32.80	514.38	5.41	0.57
221	28.30	2.83	2.83	-16.51	258.94	2.72	0.78
222	28.40	2.83	2.83	121.41	27.83	1.28	-0.91
223	28.53	2.83	2.83	560.65	-35.75	5.89	0.67
224	28.67	2.83	2.83	765.64	-48.82	8.05	0.30
225	28.80	2.83	2.83	829.38	-52.89	8.72	-0.18
226	28.93	2.83	2.83	791.80	-50.49	8.32	-0.34
227	29.07	2.83	2.83	618.44	-39.44	6.50	-0.78

228	29.20	2.83	2.83	219.16	24.15	2.30	-0.91
229	29.33	2.83	2.83	-12.44	195.02	2.05	-0.82
230	29.47	2.83	2.83	-22.66	355.39	3.73	-0.61
231	29.60	2.83	2.83	-24.64	386.35	4.06	-0.38
232	29.73	2.83	2.83	-21.86	342.85	3.60	-0.33
233	29.87	2.83	2.83	18.83	271.40	2.85	-0.32
234	30.00	2.83	2.83	29.02	5.54	0.30	-0.31

Verifiche a fessurazione

Combinazione n° 22

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

A_{fs} area di armatura in corrispondenza del lembo di monte in [cmq]

A_{fi} area di armatura in corrispondenza del lembo di valle in [cmq]

M_{pr} Momento di prima fessurazione espressa in [kgm]

M Momento agente nella sezione espressa in [kgm]

ε_m deformazione media espressa in [%]

s_m Distanza media tra le fessure espressa in [mm]

w Apertura media della fessura espressa in [mm]

Verifica fessurazione paramento

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	0.00	10.05	8.04	-2448	0	0.0000	0.00	0.000
2	0.13	10.05	8.04	-2552	-3	0.0000	0.00	0.000
3	0.25	10.05	8.04	-2659	-11	0.0000	0.00	0.000
4	0.38	10.05	8.04	-2767	-28	0.0000	0.00	0.000
5	0.50	10.05	8.04	-2878	-54	0.0000	0.00	0.000
6	0.63	14.07	8.04	-3106	-91	0.0000	0.00	0.000
7	0.75	14.07	8.04	-3224	-145	0.0000	0.00	0.000
8	0.88	14.07	8.04	-3344	-221	0.0000	0.00	0.000
9	1.00	14.07	8.04	-3466	-319	0.0000	0.00	0.000
10	1.13	14.07	8.04	-3590	-444	0.0000	0.00	0.000
11	1.25	14.07	8.04	-3716	-597	0.0000	0.00	0.000
12	1.38	14.07	8.04	-3844	-780	0.0000	0.00	0.000
13	1.50	14.07	8.04	-3974	-995	0.0000	0.00	0.000
14	1.63	14.07	8.04	-4106	-1244	0.0000	0.00	0.000
15	1.75	14.07	8.04	-4241	-1529	0.0000	0.00	0.000
16	1.88	14.07	8.04	-4377	-1851	0.0000	0.00	0.000
17	2.00	28.15	16.08	-5101	-2212	0.0000	0.00	0.000
18	2.13	14.07	8.04	-4656	-2615	0.0000	0.00	0.000
19	2.25	14.07	8.04	-4798	-3060	0.0000	0.00	0.000
20	2.38	14.07	8.04	-4943	-3550	0.0000	0.00	0.000
21	2.50	14.07	8.04	-5090	-4085	0.0000	0.00	0.000

Verifica fessurazione fondazione

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	-1.06	8.04	8.04	-4193	-13	0.0000	0.00	0.000
2	-0.99	8.04	8.04	4193	182	0.0000	0.00	0.000
3	-0.93	8.04	8.04	4193	294	0.0000	0.00	0.000
4	-0.86	8.04	8.04	4193	455	0.0000	0.00	0.000
5	-0.79	8.04	8.04	4193	643	0.0000	0.00	0.000
6	-0.73	8.04	8.04	4193	842	0.0000	0.00	0.000
7	-0.66	8.04	8.04	4193	1116	0.0000	0.00	0.000
8	-0.60	8.04	8.04	4193	1639	0.0000	0.00	0.000
9	-0.55	8.04	8.04	4193	2289	0.0000	0.00	0.000
10	-0.49	8.04	8.04	4193	3089	0.0000	0.00	0.000
11	-0.43	8.04	10.05	4267	4061	0.0000	0.00	0.000
12	0.00	8.04	8.04	-4193	-2056	0.0000	0.00	0.000
13	0.04	8.04	8.04	-4193	-1860	0.0000	0.00	0.000
14	0.11	8.04	8.04	-4193	-1559	0.0000	0.00	0.000
15	0.17	8.04	8.04	-4193	-1286	0.0000	0.00	0.000
16	0.24	8.04	8.04	-4193	-1039	0.0000	0.00	0.000
17	0.31	8.04	8.04	-4193	-818	0.0000	0.00	0.000
18	0.37	8.04	8.04	-4193	-623	0.0000	0.00	0.000
19	0.44	8.04	8.04	-4193	-455	0.0000	0.00	0.000
20	0.51	8.04	8.04	-4193	-313	0.0000	0.00	0.000
21	0.57	8.04	8.04	-4193	-204	0.0000	0.00	0.000
22	0.64	8.04	8.04	-4193	-118	0.0000	0.00	0.000
23	0.71	8.04	8.04	-4193	-55	0.0000	0.00	0.000
24	0.77	8.04	8.04	-4193	-16	0.0000	0.00	0.000
25	0.84	8.04	8.04	4193	2	0.0000	0.00	0.000

Analisi dei pali

Combinazione n° 22

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	6945.0
Verticale	[kg]	9502.5
Momento	[kgm]	-4752.7

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.22104
Verticale	[cm]	0.00483
Rotazione	[°]	-0.00457

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]
1	32	799	6411	0
2	33	16502	6411	0

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 22

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
A _f	area di armatura espressa in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
σ _f	tensione nell'acciaio espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{stf}	tensione nelle staffe espressa in [kg/cmq]

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _f	σ _c	σ _f
1	0.00	0	799	6411	52.28	0.14	2.06
2	0.23	-1442	1081	6373	52.28	4.39	109.91
3	0.45	-2876	1359	6338	52.28	8.80	236.17
4	0.68	-4302	1636	6306	52.28	13.17	361.85
5	0.90	-5721	1909	5181	52.28	17.52	486.96
6	1.13	-6887	2179	4159	52.28	21.09	588.77
7	1.35	-7823	2447	3233	52.28	23.96	669.38
8	1.57	-8550	2711	2401	52.28	26.19	730.83
9	1.80	-9091	2973	1658	52.28	27.84	775.04
10	2.02	-9464	3232	999	52.28	28.98	803.88
11	2.25	-9688	3488	418	52.28	29.66	819.07
12	2.48	-9782	3742	-90	52.28	29.95	822.25
13	2.70	-9762	3992	-530	52.28	29.88	814.95
14	2.93	-9643	4240	-908	52.28	29.50	798.58
15	3.15	-9438	4485	-1228	52.28	28.87	774.44
16	3.38	-9162	4727	-1497	52.28	28.01	743.72
17	3.60	-8825	4966	-1718	52.28	26.96	707.52
18	3.83	-8439	5203	-1898	52.28	25.76	666.80
19	4.05	-8012	5437	-2040	52.28	24.44	622.47
20	4.28	-7553	5667	-2149	52.28	23.01	575.30
21	4.50	-7069	5895	-2229	52.28	21.51	526.01
22	4.73	-6568	6121	-2284	52.28	19.94	475.21
23	4.95	-6054	6343	-2318	52.28	18.34	423.46
24	5.17	-5532	6563	-2333	52.28	16.70	371.26
25	5.40	-5007	6779	-2334	52.28	15.05	319.04
26	5.63	-4482	6993	-2323	52.28	13.39	267.24
27	5.85	-3960	7205	-2301	52.28	11.73	216.31
28	6.08	-3442	7413	-2272	52.28	10.08	166.80
29	6.30	-2931	7687	-2117	52.28	8.43	118.43
30	6.53	-2454	7970	-1943	52.28	6.90	84.08
31	6.75	-2017	8253	-1757	52.28	5.55	69.64
32	6.98	-1622	8535	-1564	52.28	4.46	57.63
33	7.20	-1270	8818	-1367	52.28	3.68	48.76
34	7.42	-962	9101	-1170	52.28	3.16	42.72
35	7.65	-699	9384	-976	52.28	2.77	38.19

36	7.88	-480	9666	-785	52.28	2.46	34.54
37	8.10	-303	9949	-600	52.28	2.21	31.74
38	8.33	-168	10232	-420	52.28	2.04	29.77
39	8.55	-74	10515	-247	52.28	1.93	28.61
40	8.78	-18	10797	-80	52.28	1.89	28.23
41	9.00	0	11080	-80	52.28	1.91	28.60

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	σ _c	σ _r
1	0.00	0	16502	6411	52.28	2.84	42.60
2	0.23	-1442	16782	6373	52.28	5.28	72.15
3	0.45	-2876	17056	6338	52.28	8.02	104.98
4	0.68	-4302	17323	6306	52.28	11.84	148.40
5	0.90	-5721	17584	5181	52.28	16.18	195.79
6	1.13	-6887	17838	4159	52.28	19.84	282.04
7	1.35	-7823	18086	3233	52.28	22.77	357.22
8	1.57	-8550	18327	2401	52.28	25.05	415.94
9	1.80	-9091	18562	1658	52.28	26.73	458.97
10	2.02	-9464	18790	999	52.28	27.88	487.61
11	2.25	-9688	19012	418	52.28	28.57	503.34
12	2.48	-9782	19227	-90	52.28	28.84	507.65
13	2.70	-9762	19436	-530	52.28	28.76	502.00
14	2.93	-9643	19639	-908	52.28	28.36	487.78
15	3.15	-9438	19835	-1228	52.28	27.69	466.31
16	3.38	-9162	20024	-1497	52.28	26.80	438.81
17	3.60	-8825	20207	-1718	52.28	25.71	406.44
18	3.83	-8439	20383	-1898	52.28	24.47	370.28
19	4.05	-8012	20554	-2040	52.28	23.10	331.36
20	4.28	-7553	20717	-2149	52.28	21.62	290.65
21	4.50	-7069	20874	-2229	52.28	20.08	249.14
22	4.73	-6568	21025	-2284	52.28	18.49	224.92
23	4.95	-6054	21169	-2318	52.28	16.88	207.72
24	5.17	-5532	21307	-2333	52.28	15.28	190.43
25	5.40	-5007	21438	-2334	52.28	13.73	173.40
26	5.63	-4482	21563	-2323	52.28	12.26	157.04
27	5.85	-3960	21681	-2301	52.28	10.92	141.80
28	6.08	-3442	21793	-2272	52.28	9.72	128.02
29	6.30	-2931	22056	-2117	52.28	8.71	116.24
30	6.53	-2454	22339	-1943	52.28	7.91	106.73
31	6.75	-2017	22622	-1757	52.28	7.23	98.70
32	6.98	-1622	22905	-1564	52.28	6.63	91.53
33	7.20	-1270	23187	-1367	52.28	6.09	85.23
34	7.42	-962	23470	-1170	52.28	5.63	79.82
35	7.65	-699	23753	-976	52.28	5.24	75.29
36	7.88	-480	24036	-785	52.28	4.93	71.63
37	8.10	-303	24318	-600	52.28	4.69	68.83
38	8.33	-168	24601	-420	52.28	4.51	66.86
39	8.55	-74	24884	-247	52.28	4.40	65.71
40	8.78	-18	25166	-80	52.28	4.36	65.33
41	9.00	0	25449	-80	52.28	4.38	65.70

COMBINAZIONE n° 23

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	1189.06	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	44.49	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	343.73	[kg]		
Inerzia verticale del muro	171.86	[kg]		
Inerzia del terrapieno fondazione di monte	336.30	[kg]		
Inerzia verticale del terrapieno fondazione di monte	168.15	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	7392.36	[kg]
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Risultante dei carichi applicati in dir. verticale	10294.04	[kg]
Sforzo normale sul piano di posa della fondazione	10294.04	[kg]
Sforzo tangenziale sul piano di posa della fondazione	7392.36	[kg]
Eccentricità rispetto al baricentro della fondazione	0.50	[m]
Lunghezza fondazione reagente	1.36	[m]
Risultante in fondazione	12673.37	[kg]
Inclinazione della risultante (rispetto alla normale)	35.68	[°]
Momento rispetto al baricentro della fondazione	5130.82	[kgm]

Sollecitazioni paramento

Combinazione n° 23

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	3.50	60.52
3	0.25	191.59	15.03	133.67
4	0.38	290.45	36.18	219.43
5	0.50	391.36	68.52	318.17
6	0.63	494.32	114.37	446.05
7	0.75	599.32	178.71	618.45
8	0.88	706.36	266.01	815.89
9	1.00	815.45	378.83	1032.11
10	1.13	926.58	519.42	1265.90
11	1.25	1039.77	689.92	1516.31
12	1.38	1154.99	892.34	1782.65
13	1.50	1272.26	1128.64	2064.35
14	1.63	1391.58	1400.71	2360.98
15	1.75	1512.94	1710.37	2672.16
16	1.88	1636.35	2059.42	2997.62
17	2.00	1761.80	2449.62	3337.12
18	2.13	1889.30	2882.72	3690.45
19	2.25	2018.84	3360.41	4057.46
20	2.38	2150.43	3884.41	4438.02
21	2.50	2284.06	4456.30	4829.89

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 23

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-13.88	2.69	-1048.93	2004.89
2	0.07	-115.91	196.75	0.00	1958.15
3	0.13	-102.52	318.62	0.00	2605.56
4	0.20	0.00	493.99	0.00	4459.73
5	0.27	0.00	698.71	0.00	6318.25
6	0.33	0.00	915.10	0.00	8266.31
7	0.40	0.00	1213.02	0.00	10383.28
8	0.46	0.00	1780.97	-265.18	12579.36
9	0.52	0.00	2486.71	-1044.20	14999.69
10	0.57	0.00	3354.17	-2509.15	17629.40
11	0.63	0.00	4407.85	-2552.18	19552.78
12	1.06	-2054.30	0.00	-5006.46	0.00
13	1.10	-1857.55	0.00	-4771.60	0.00
14	1.17	-1557.43	0.00	-4335.77	0.00
15	1.23	-1284.25	0.00	-3927.84	0.00
16	1.30	-1037.07	0.00	-3528.34	0.00
17	1.37	-816.11	0.00	-3130.40	0.00
18	1.43	-621.48	0.00	-2733.61	0.00
19	1.50	-453.21	0.00	-2337.70	0.00
20	1.57	-311.30	0.00	-1942.55	0.00
21	1.63	-203.39	0.00	-1548.13	0.00
22	1.70	-118.36	0.00	-1154.46	0.00
23	1.77	-56.00	0.00	-761.67	0.00
24	1.83	-16.07	0.00	-419.69	0.00
25	1.90	0.00	2.22	-101.46	30.13

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-839.38	44.36	-928.81	334.13
2	0.13	-784.08	41.64	-2836.41	1902.82
3	0.27	-572.91	32.39	-4646.52	4024.32
4	0.40	-111.68	30.11	-4693.45	5497.31
5	0.50	-9.25	298.29	-4720.29	3779.40
6	0.63	-31.52	568.57	-3532.13	2195.26
7	0.77	-44.83	689.08	-2079.04	1048.88
8	0.90	-48.86	717.71	-698.08	698.08
9	1.03	-44.83	689.08	-1048.88	2079.04
10	1.17	-31.52	568.57	-2195.26	3532.13
11	1.30	-9.25	298.29	-3779.40	4720.29
12	1.40	-111.68	30.11	-5497.31	4693.45
13	1.53	-572.91	32.39	-4024.32	4646.52
14	1.67	-784.08	41.64	-1902.82	2836.41
15	1.80	-839.38	44.36	-928.81	928.81
16	1.93	-784.08	41.64	-2836.41	1902.82
17	2.07	-572.91	32.39	-4646.52	4024.32
18	2.20	-111.68	30.11	-4693.45	5497.31
19	2.30	-9.25	298.29	-4720.29	3779.40
20	2.43	-31.52	568.57	-3532.13	2195.26
21	2.57	-44.83	689.08	-2079.04	1048.88
22	2.70	-48.86	717.71	-698.08	698.08
23	2.83	-44.83	689.08	-1048.88	2079.04
24	2.97	-31.52	568.57	-2195.26	3532.13
25	3.10	-9.25	298.29	-3779.40	4720.29
26	3.20	-111.68	30.11	-5497.31	4693.45
27	3.33	-572.91	32.39	-4024.32	4646.52
28	3.47	-784.08	41.64	-1902.82	2836.41
29	3.60	-839.38	44.36	-928.81	928.81
30	3.73	-784.08	41.64	-2836.41	1902.82
31	3.87	-572.91	32.39	-4646.52	4024.32
32	4.00	-111.68	30.11	-4693.45	5497.31
33	4.10	-9.25	298.29	-4720.29	3779.40

34	4.23	-31.52	568.57	-3532.13	2195.26
35	4.37	-44.83	689.08	-2079.04	1048.88
36	4.50	-48.86	717.71	-698.08	698.08
37	4.63	-44.83	689.08	-1048.88	2079.04
38	4.77	-31.52	568.57	-2195.26	3532.13
39	4.90	-9.25	298.29	-3779.40	4720.29
40	5.00	-111.68	30.11	-5497.31	4693.45
41	5.13	-572.91	32.39	-4024.32	4646.52
42	5.27	-784.08	41.64	-1902.82	2836.41
43	5.40	-839.38	44.36	-928.81	928.81
44	5.53	-784.08	41.64	-2836.41	1902.82
45	5.67	-572.91	32.39	-4646.52	4024.32
46	5.80	-111.68	30.11	-4693.45	5497.31
47	5.90	-9.25	298.29	-4720.29	3779.40
48	6.03	-31.52	568.57	-3532.13	2195.26
49	6.17	-44.83	689.08	-2079.04	1048.88
50	6.30	-48.86	717.71	-698.08	698.08
51	6.43	-44.83	689.08	-1048.88	2079.04
52	6.57	-31.52	568.57	-2195.26	3532.13
53	6.70	-9.25	298.29	-3779.40	4720.29
54	6.80	-111.68	30.11	-5497.31	4693.45
55	6.93	-572.91	32.39	-4024.32	4646.52
56	7.07	-784.08	41.64	-1902.82	2836.41
57	7.20	-839.38	44.36	-928.81	928.81
58	7.33	-784.08	41.64	-2836.41	1902.82
59	7.47	-572.91	32.39	-4646.52	4024.32
60	7.60	-111.68	30.11	-4693.45	5497.31
61	7.70	-9.25	298.29	-4720.29	3779.40
62	7.83	-31.52	568.57	-3532.13	2195.26
63	7.97	-44.83	689.08	-2079.04	1048.88
64	8.10	-48.86	717.71	-698.08	698.08
65	8.23	-44.83	689.08	-1048.88	2079.04
66	8.37	-31.52	568.57	-2195.26	3532.13
67	8.50	-9.25	298.29	-3779.40	4720.29
68	8.60	-111.68	30.11	-5497.31	4693.45
69	8.73	-572.91	32.39	-4024.32	4646.52
70	8.87	-784.08	41.64	-1902.82	2836.41
71	9.00	-839.38	44.36	-928.81	928.81
72	9.13	-784.08	41.64	-2836.41	1902.82
73	9.27	-572.91	32.39	-4646.52	4024.32
74	9.40	-111.68	30.11	-4693.45	5497.31
75	9.50	-9.25	298.29	-4720.29	3779.40
76	9.63	-31.52	568.57	-3532.13	2195.26
77	9.77	-44.83	689.08	-2079.04	1048.88
78	9.90	-48.86	717.71	-698.08	698.08
79	10.03	-44.83	689.08	-1048.88	2079.04
80	10.17	-31.52	568.57	-2195.26	3532.13
81	10.30	-9.25	298.29	-3779.40	4720.29
82	10.40	-111.68	30.11	-5497.31	4693.45
83	10.53	-572.91	32.39	-4024.32	4646.52
84	10.67	-784.08	41.64	-1902.82	2836.41
85	10.80	-839.38	44.36	-928.81	928.81
86	10.93	-784.08	41.64	-2836.41	1902.82
87	11.07	-572.91	32.39	-4646.52	4024.32
88	11.20	-111.68	30.11	-4693.45	5497.31
89	11.30	-9.25	298.29	-4720.29	3779.40
90	11.43	-31.52	568.57	-3532.13	2195.26
91	11.57	-44.83	689.08	-2079.04	1048.88
92	11.70	-48.86	717.71	-698.08	698.08
93	11.83	-44.83	689.08	-1048.88	2079.04
94	11.97	-31.52	568.57	-2195.26	3532.13
95	12.10	-9.25	298.29	-3779.40	4720.29
96	12.20	-111.68	30.11	-5497.31	4693.45
97	12.33	-572.91	32.39	-4024.32	4646.52
98	12.47	-784.08	41.64	-1902.82	2836.41
99	12.60	-839.38	44.36	-928.81	928.81
100	12.73	-784.08	41.64	-2836.41	1902.82
101	12.87	-572.91	32.39	-4646.52	4024.32
102	13.00	-111.68	30.11	-4693.45	5497.31
103	13.10	-9.25	298.29	-4720.29	3779.40
104	13.23	-31.52	568.57	-3532.13	2195.26
105	13.37	-44.83	689.08	-2079.04	1048.88
106	13.50	-48.86	717.71	-698.08	698.08
107	13.63	-44.83	689.08	-1048.88	2079.04
108	13.77	-31.52	568.57	-2195.26	3532.13
109	13.90	-9.25	298.29	-3779.40	4720.29
110	14.00	-111.68	30.11	-5497.31	4693.45

111	14.13	-572.91	32.39	-4024.32	4646.52
112	14.27	-784.08	41.64	-1902.82	2836.41
113	14.40	-839.38	44.36	-928.81	928.81
114	14.53	-784.08	41.64	-2836.41	1902.82
115	14.67	-572.91	32.39	-4646.52	4024.32
116	14.80	-111.68	30.11	-4693.45	5497.31
117	14.90	-9.25	298.29	-4720.29	3779.40
118	15.03	-31.52	568.57	-3532.13	2195.26
119	15.17	-44.83	689.08	-2079.04	1048.88
120	15.30	-48.86	717.71	-698.08	698.08
121	15.43	-44.83	689.08	-1048.88	2079.04
122	15.57	-31.52	568.57	-2195.26	3532.13
123	15.70	-9.25	298.29	-3779.40	4720.29
124	15.80	-111.68	30.11	-5497.31	4693.45
125	15.93	-572.91	32.39	-4024.32	4646.52
126	16.07	-784.08	41.64	-1902.82	2836.41
127	16.20	-839.38	44.36	-928.81	928.81
128	16.33	-784.08	41.64	-2836.41	1902.82
129	16.47	-572.91	32.39	-4646.52	4024.32
130	16.60	-111.68	30.11	-4693.45	5497.31
131	16.70	-9.25	298.29	-4720.29	3779.40
132	16.83	-31.52	568.57	-3532.13	2195.26
133	16.97	-44.83	689.08	-2079.04	1048.88
134	17.10	-48.86	717.71	-698.08	698.08
135	17.23	-44.83	689.08	-1048.88	2079.04
136	17.37	-31.52	568.57	-2195.26	3532.13
137	17.50	-9.25	298.29	-3779.40	4720.29
138	17.60	-111.68	30.11	-5497.31	4693.45
139	17.73	-572.91	32.39	-4024.32	4646.52
140	17.87	-784.08	41.64	-1902.82	2836.41
141	18.00	-839.38	44.36	-928.81	928.81
142	18.13	-784.08	41.64	-2836.41	1902.82
143	18.27	-572.91	32.39	-4646.52	4024.32
144	18.40	-111.68	30.11	-4693.45	5497.31
145	18.50	-9.25	298.29	-4720.29	3779.40
146	18.63	-31.52	568.57	-3532.13	2195.26
147	18.77	-44.83	689.08	-2079.04	1048.88
148	18.90	-48.86	717.71	-698.08	698.08
149	19.03	-44.83	689.08	-1048.88	2079.04
150	19.17	-31.52	568.57	-2195.26	3532.13
151	19.30	-9.25	298.29	-3779.40	4720.29
152	19.40	-111.68	30.11	-5497.31	4693.45
153	19.53	-572.91	32.39	-4024.32	4646.52
154	19.67	-784.08	41.64	-1902.82	2836.41
155	19.80	-839.38	44.36	-928.81	928.81
156	19.93	-784.08	41.64	-2836.41	1902.82
157	20.07	-572.91	32.39	-4646.52	4024.32
158	20.20	-111.68	30.11	-4693.45	5497.31
159	20.30	-9.25	298.29	-4720.29	3779.40
160	20.43	-31.52	568.57	-3532.13	2195.26
161	20.57	-44.83	689.08	-2079.04	1048.88
162	20.70	-48.86	717.71	-698.08	698.08
163	20.83	-44.83	689.08	-1048.88	2079.04
164	20.97	-31.52	568.57	-2195.26	3532.13
165	21.10	-9.25	298.29	-3779.40	4720.29
166	21.20	-111.68	30.11	-5497.31	4693.45
167	21.33	-572.91	32.39	-4024.32	4646.52
168	21.47	-784.08	41.64	-1902.82	2836.41
169	21.60	-839.38	44.36	-928.81	928.81
170	21.73	-784.08	41.64	-2836.41	1902.82
171	21.87	-572.91	32.39	-4646.52	4024.32
172	22.00	-111.68	30.11	-4693.45	5497.31
173	22.10	-9.25	298.29	-4720.29	3779.40
174	22.23	-31.53	568.57	-3532.13	2195.26
175	22.37	-44.83	689.08	-2079.04	1048.88
176	22.50	-48.86	717.71	-698.08	698.07
177	22.63	-44.83	689.08	-1048.89	2079.04
178	22.77	-31.53	568.57	-2195.26	3532.13
179	22.90	-9.25	298.29	-3779.40	4720.29
180	23.00	-111.68	30.11	-5497.31	4693.45
181	23.13	-572.91	32.38	-4024.32	4646.51
182	23.27	-784.08	41.62	-1902.81	2836.41
183	23.40	-839.38	44.34	-928.81	928.80
184	23.53	-784.09	41.62	-2836.42	1902.79
185	23.67	-572.92	32.37	-4646.53	4024.30
186	23.80	-111.68	30.11	-4693.46	5497.31
187	23.90	-9.28	298.28	-4720.30	3779.39

188	24.03	-31.56	568.56	-3532.14	2195.25
189	24.17	-44.87	689.07	-2079.06	1048.87
190	24.30	-48.91	717.70	-698.10	698.04
191	24.43	-44.89	689.07	-1048.91	2079.00
192	24.57	-31.60	568.55	-2195.30	3532.07
193	24.70	-9.35	298.27	-3779.45	4720.22
194	24.80	-111.70	30.11	-5497.45	4693.38
195	24.93	-572.95	32.25	-4024.19	4646.43
196	25.07	-784.12	41.47	-1902.69	2836.30
197	25.20	-839.43	44.16	-929.00	928.66
198	25.33	-784.15	41.40	-2836.66	1902.12
199	25.47	-573.00	32.10	-4646.84	4023.69
200	25.60	-111.77	30.11	-4693.82	5497.35
201	25.70	-9.67	298.15	-4720.67	3779.12
202	25.83	-32.02	568.39	-3532.60	2194.90
203	25.97	-45.43	688.85	-2079.65	1048.45
204	26.10	-49.59	717.44	-698.87	697.04
205	26.23	-45.69	688.72	-1049.78	2077.74
206	26.37	-32.57	568.10	-2196.33	3530.43
207	26.50	-10.55	297.67	-3780.91	4718.21
208	26.60	-112.30	30.10	-5501.51	4691.38
209	26.73	-573.89	30.56	-4020.26	4643.78
210	26.87	-785.34	39.42	-1898.98	2832.89
211	27.00	-840.99	41.74	-934.64	924.27
212	27.13	-786.06	38.44	-2843.90	1881.61
213	27.27	-575.49	28.46	-4656.32	4005.05
214	27.40	-114.48	30.08	-4704.87	5498.51
215	27.50	-15.06	293.97	-4731.75	3770.88
216	27.63	-38.42	563.18	-3546.35	2184.27
217	27.77	-53.16	682.18	-2097.47	1035.49
218	27.90	-58.90	709.26	-721.93	667.17
219	28.03	-56.68	678.16	-1077.03	2040.27
220	28.17	-45.68	554.24	-2229.43	3482.23
221	28.30	-26.11	279.05	-3829.02	4659.57
222	28.40	-130.83	30.01	-5636.87	4633.03
223	28.53	-604.10	12.04	-3924.04	4567.02
224	28.67	-824.99	20.26	-1858.24	2734.44
225	28.80	-893.66	23.62	-1101.76	796.77
226	28.93	-853.17	24.08	-3069.76	1225.87
227	29.07	-666.37	22.95	-4968.55	3386.73
228	29.20	-236.14	26.02	-4942.68	5496.38
229	29.33	0.00	210.13	-4973.70	3128.01
230	29.47	0.00	382.92	-3851.64	1425.79
231	29.60	0.00	416.26	-2771.80	376.76
232	29.73	-0.13	369.37	-2036.19	7.07
233	29.87	-20.31	292.36	-1929.75	103.04
234	30.00	-31.39	8.76	-1962.85	98.16

Armature e tensioni nei materiali del muro

Combinazione n° 23

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta sul lembo di monte in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta sul lembo di valle in [kg/cmq]

Nr.	Y	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fs}	σ _{fi}
1	0.00	100, 30	10.05	8.04	0.00	0.00	0.00	0.00
2	0.13	100, 31	10.05	8.04	0.05	0.03	-0.19	-0.66
3	0.25	100, 31	10.05	8.04	0.14	0.06	0.24	-1.86
4	0.38	100, 32	10.05	8.04	0.31	0.09	2.79	-3.95
5	0.50	100, 33	10.05	8.04	0.59	0.13	9.09	-6.98
6	0.63	100, 33	14.07	8.04	0.88	0.17	15.02	-10.39
7	0.75	100, 34	14.07	8.04	1.32	0.24	27.11	-15.21
8	0.88	100, 35	14.07	8.04	1.88	0.30	44.19	-21.33
9	1.00	100, 35	14.07	8.04	2.57	0.38	66.56	-28.79
10	1.13	100, 36	14.07	8.04	3.39	0.45	94.42	-37.62
11	1.25	100, 37	14.07	8.04	4.34	0.53	127.92	-47.84
12	1.38	100, 37	14.07	8.04	5.42	0.61	167.17	-59.46

13	1.50	100, 38	14.07	8.04	6.62	0.70	212.26	-72.47
14	1.63	100, 39	14.07	8.04	7.95	0.78	263.26	-86.89
15	1.75	100, 39	14.07	8.04	9.40	0.87	320.22	-102.70
16	1.88	100, 40	14.07	8.04	10.97	0.96	383.19	-119.89
17	2.00	100, 40	28.15	16.08	9.30	1.05	232.45	-109.76
18	2.13	100, 41	14.07	8.04	14.46	1.14	527.27	-158.36
19	2.25	100, 42	14.07	8.04	16.38	1.23	608.41	-179.62
20	2.38	100, 42	14.07	8.04	18.41	1.32	695.65	-202.20
21	2.50	100, 43	14.07	8.04	20.54	1.42	788.97	-226.08

Armature e tensioni nei materiali della fondazione

Combinazione n° 23

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta in corrispondenza del lembo inferiore in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta in corrispondenza del lembo superiore in [kg/cmq]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.09	0.21	0.97	5.02
2	0.07	100, 40	8.04	8.04	1.25	0.27	71.19	41.94
3	0.13	100, 40	8.04	8.04	2.02	0.61	115.29	37.10
4	0.20	100, 40	8.04	8.04	3.13	0.93	178.75	-28.69
5	0.27	100, 40	8.04	8.04	4.43	1.24	252.82	-40.59
6	0.33	100, 40	8.04	8.04	5.80	1.55	331.12	-53.16
7	0.40	100, 40	8.04	8.04	7.69	1.86	438.92	-70.46
8	0.46	100, 40	8.04	8.04	11.30	2.13	644.43	-103.45
9	0.52	100, 40	8.04	8.04	15.77	2.40	899.80	-144.45
10	0.57	100, 40	8.04	8.04	21.27	2.66	1213.69	-194.84
11	0.63	100, 40	8.04	10.05	25.61	2.92	1284.47	-248.92

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.01	-0.02	0.80	-0.13
2	0.07	100, 40	8.04	8.04	0.10	-0.11	-0.93	5.81
3	0.13	100, 40	8.04	8.04	0.36	-0.22	-3.25	20.26
4	0.20	100, 40	8.04	8.04	0.75	-0.34	-6.88	42.83
5	0.27	100, 40	8.04	8.04	1.29	-0.45	-11.81	73.60
6	0.33	100, 40	8.04	8.04	1.97	-0.56	-18.08	112.64
7	0.40	100, 40	8.04	8.04	2.87	-0.67	-26.33	163.99
8	0.47	100, 40	8.04	8.04	3.94	-0.78	-36.10	224.88
9	0.53	100, 40	8.04	8.04	5.18	-0.89	-47.41	295.30
10	0.60	100, 40	8.04	8.04	6.58	-1.01	-60.24	375.26
11	0.67	100, 40	8.04	8.04	8.15	-1.12	-74.60	464.70
12	0.73	100, 40	8.04	8.04	9.88	-1.23	-90.47	563.54
13	0.80	100, 40	8.04	8.04	11.78	-1.34	-107.90	672.14
14	0.84	100, 40	8.04	8.04	13.03	-1.42	-119.33	743.34

Armature e tensioni piastre

Combinazione n° 23

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	-2.84	44.52	0.47	0.01
2	0.13	2.83	2.83	-2.66	41.79	0.44	0.01
3	0.27	2.83	2.83	-2.07	32.51	0.34	0.03

4	0.40	2.83	2.83	1.30	14.22	0.15	-0.04
5	0.50	2.83	2.83	9.28	-0.59	0.10	-0.05
6	0.63	2.83	2.83	31.64	-2.02	0.33	-0.04
7	0.77	2.83	2.83	44.99	-2.87	0.47	-0.02
8	0.90	2.83	2.83	49.04	-3.13	0.52	0.01
9	1.03	2.83	2.83	44.99	-2.87	0.47	0.02
10	1.17	2.83	2.83	31.64	-2.02	0.33	0.04
11	1.30	2.83	2.83	9.28	-0.59	0.10	0.05
12	1.40	2.83	2.83	1.30	14.22	0.15	0.04
13	1.53	2.83	2.83	-2.07	32.51	0.34	-0.03
14	1.67	2.83	2.83	-2.66	41.79	0.44	-0.01
15	1.80	2.83	2.83	-2.84	44.52	0.47	0.01
16	1.93	2.83	2.83	-2.66	41.79	0.44	0.01
17	2.07	2.83	2.83	-2.07	32.51	0.34	0.03
18	2.20	2.83	2.83	1.30	14.22	0.15	-0.04
19	2.30	2.83	2.83	9.28	-0.59	0.10	-0.05
20	2.43	2.83	2.83	31.64	-2.02	0.33	-0.04
21	2.57	2.83	2.83	44.99	-2.87	0.47	-0.02
22	2.70	2.83	2.83	49.04	-3.13	0.52	0.01
23	2.83	2.83	2.83	44.99	-2.87	0.47	0.02
24	2.97	2.83	2.83	31.64	-2.02	0.33	0.04
25	3.10	2.83	2.83	9.28	-0.59	0.10	0.05
26	3.20	2.83	2.83	1.30	14.22	0.15	0.04
27	3.33	2.83	2.83	-2.07	32.51	0.34	-0.03
28	3.47	2.83	2.83	-2.66	41.79	0.44	-0.01
29	3.60	2.83	2.83	-2.84	44.52	0.47	0.01
30	3.73	2.83	2.83	-2.66	41.79	0.44	0.01
31	3.87	2.83	2.83	-2.07	32.51	0.34	0.03
32	4.00	2.83	2.83	1.30	14.22	0.15	-0.04
33	4.10	2.83	2.83	9.28	-0.59	0.10	-0.05
34	4.23	2.83	2.83	31.64	-2.02	0.33	-0.04
35	4.37	2.83	2.83	44.99	-2.87	0.47	-0.02
36	4.50	2.83	2.83	49.04	-3.13	0.52	0.01
37	4.63	2.83	2.83	44.99	-2.87	0.47	0.02
38	4.77	2.83	2.83	31.64	-2.02	0.33	0.04
39	4.90	2.83	2.83	9.28	-0.59	0.10	0.05
40	5.00	2.83	2.83	1.30	14.22	0.15	0.04
41	5.13	2.83	2.83	-2.07	32.51	0.34	-0.03
42	5.27	2.83	2.83	-2.66	41.79	0.44	-0.01
43	5.40	2.83	2.83	-2.84	44.52	0.47	0.01
44	5.53	2.83	2.83	-2.66	41.79	0.44	0.01
45	5.67	2.83	2.83	-2.07	32.51	0.34	0.03
46	5.80	2.83	2.83	1.30	14.22	0.15	-0.04
47	5.90	2.83	2.83	9.28	-0.59	0.10	-0.05
48	6.03	2.83	2.83	31.64	-2.02	0.33	-0.04
49	6.17	2.83	2.83	44.99	-2.87	0.47	-0.02
50	6.30	2.83	2.83	49.04	-3.13	0.52	0.01
51	6.43	2.83	2.83	44.99	-2.87	0.47	0.02
52	6.57	2.83	2.83	31.64	-2.02	0.33	0.04
53	6.70	2.83	2.83	9.28	-0.59	0.10	0.05
54	6.80	2.83	2.83	1.30	14.22	0.15	0.04
55	6.93	2.83	2.83	-2.07	32.51	0.34	-0.03
56	7.07	2.83	2.83	-2.66	41.79	0.44	-0.01
57	7.20	2.83	2.83	-2.84	44.52	0.47	0.01
58	7.33	2.83	2.83	-2.66	41.79	0.44	0.01
59	7.47	2.83	2.83	-2.07	32.51	0.34	0.03
60	7.60	2.83	2.83	1.30	14.22	0.15	-0.04
61	7.70	2.83	2.83	9.28	-0.59	0.10	-0.05
62	7.83	2.83	2.83	31.64	-2.02	0.33	-0.04
63	7.97	2.83	2.83	44.99	-2.87	0.47	-0.02
64	8.10	2.83	2.83	49.04	-3.13	0.52	-0.01
65	8.23	2.83	2.83	44.99	-2.87	0.47	0.02
66	8.37	2.83	2.83	31.64	-2.02	0.33	0.04
67	8.50	2.83	2.83	9.28	-0.59	0.10	0.05
68	8.60	2.83	2.83	1.30	14.22	0.15	0.04
69	8.73	2.83	2.83	-2.07	32.51	0.34	-0.03
70	8.87	2.83	2.83	-2.66	41.79	0.44	-0.01
71	9.00	2.83	2.83	-2.84	44.52	0.47	-0.01
72	9.13	2.83	2.83	-2.66	41.79	0.44	0.01
73	9.27	2.83	2.83	-2.07	32.51	0.34	0.03
74	9.40	2.83	2.83	1.30	14.22	0.15	-0.04
75	9.50	2.83	2.83	9.28	-0.59	0.10	-0.05
76	9.63	2.83	2.83	31.64	-2.02	0.33	-0.04
77	9.77	2.83	2.83	44.99	-2.87	0.47	-0.02
78	9.90	2.83	2.83	49.04	-3.13	0.52	-0.01
79	10.03	2.83	2.83	44.99	-2.87	0.47	0.02
80	10.17	2.83	2.83	31.64	-2.02	0.33	0.04

81	10.30	2.83	2.83	9.28	-0.59	0.10	0.05
82	10.40	2.83	2.83	1.30	14.22	0.15	0.04
83	10.53	2.83	2.83	-2.07	32.51	0.34	-0.03
84	10.67	2.83	2.83	-2.66	41.79	0.44	-0.01
85	10.80	2.83	2.83	-2.84	44.52	0.47	-0.01
86	10.93	2.83	2.83	-2.66	41.79	0.44	0.01
87	11.07	2.83	2.83	-2.07	32.51	0.34	0.03
88	11.20	2.83	2.83	1.30	14.22	0.15	-0.04
89	11.30	2.83	2.83	9.28	-0.59	0.10	-0.05
90	11.43	2.83	2.83	31.64	-2.02	0.33	-0.04
91	11.57	2.83	2.83	44.99	-2.87	0.47	-0.02
92	11.70	2.83	2.83	49.04	-3.13	0.52	-0.01
93	11.83	2.83	2.83	44.99	-2.87	0.47	0.02
94	11.97	2.83	2.83	31.64	-2.02	0.33	0.04
95	12.10	2.83	2.83	9.28	-0.59	0.10	0.05
96	12.20	2.83	2.83	1.30	14.22	0.15	0.04
97	12.33	2.83	2.83	-2.07	32.51	0.34	-0.03
98	12.47	2.83	2.83	-2.66	41.79	0.44	-0.01
99	12.60	2.83	2.83	-2.84	44.52	0.47	-0.01
100	12.73	2.83	2.83	-2.66	41.79	0.44	0.01
101	12.87	2.83	2.83	-2.07	32.51	0.34	0.03
102	13.00	2.83	2.83	1.30	14.22	0.15	-0.04
103	13.10	2.83	2.83	9.28	-0.59	0.10	-0.05
104	13.23	2.83	2.83	31.64	-2.02	0.33	-0.04
105	13.37	2.83	2.83	44.99	-2.87	0.47	-0.02
106	13.50	2.83	2.83	49.04	-3.13	0.52	-0.01
107	13.63	2.83	2.83	44.99	-2.87	0.47	0.02
108	13.77	2.83	2.83	31.64	-2.02	0.33	0.04
109	13.90	2.83	2.83	9.28	-0.59	0.10	0.05
110	14.00	2.83	2.83	1.30	14.22	0.15	0.04
111	14.13	2.83	2.83	-2.07	32.51	0.34	-0.03
112	14.27	2.83	2.83	-2.66	41.79	0.44	-0.01
113	14.40	2.83	2.83	-2.84	44.52	0.47	-0.01
114	14.53	2.83	2.83	-2.66	41.79	0.44	0.01
115	14.67	2.83	2.83	-2.07	32.51	0.34	0.03
116	14.80	2.83	2.83	1.30	14.22	0.15	-0.04
117	14.90	2.83	2.83	9.28	-0.59	0.10	-0.05
118	15.03	2.83	2.83	31.64	-2.02	0.33	-0.04
119	15.17	2.83	2.83	44.99	-2.87	0.47	-0.02
120	15.30	2.83	2.83	49.04	-3.13	0.52	-0.01
121	15.43	2.83	2.83	44.99	-2.87	0.47	0.02
122	15.57	2.83	2.83	31.64	-2.02	0.33	0.04
123	15.70	2.83	2.83	9.28	-0.59	0.10	0.05
124	15.80	2.83	2.83	1.30	14.22	0.15	0.04
125	15.93	2.83	2.83	-2.07	32.51	0.34	-0.03
126	16.07	2.83	2.83	-2.66	41.79	0.44	-0.01
127	16.20	2.83	2.83	-2.84	44.52	0.47	-0.01
128	16.33	2.83	2.83	-2.66	41.79	0.44	0.01
129	16.47	2.83	2.83	-2.07	32.51	0.34	0.03
130	16.60	2.83	2.83	1.30	14.22	0.15	-0.04
131	16.70	2.83	2.83	9.28	-0.59	0.10	-0.05
132	16.83	2.83	2.83	31.64	-2.02	0.33	-0.04
133	16.97	2.83	2.83	44.99	-2.87	0.47	-0.02
134	17.10	2.83	2.83	49.04	-3.13	0.52	-0.01
135	17.23	2.83	2.83	44.99	-2.87	0.47	0.02
136	17.37	2.83	2.83	31.64	-2.02	0.33	0.04
137	17.50	2.83	2.83	9.28	-0.59	0.10	0.05
138	17.60	2.83	2.83	1.30	14.22	0.15	0.04
139	17.73	2.83	2.83	-2.07	32.51	0.34	-0.03
140	17.87	2.83	2.83	-2.66	41.79	0.44	-0.01
141	18.00	2.83	2.83	-2.84	44.52	0.47	-0.01
142	18.13	2.83	2.83	-2.66	41.79	0.44	0.01
143	18.27	2.83	2.83	-2.07	32.51	0.34	0.03
144	18.40	2.83	2.83	1.30	14.22	0.15	-0.04
145	18.50	2.83	2.83	9.28	-0.59	0.10	-0.05
146	18.63	2.83	2.83	31.64	-2.02	0.33	-0.04
147	18.77	2.83	2.83	44.99	-2.87	0.47	-0.02
148	18.90	2.83	2.83	49.04	-3.13	0.52	-0.01
149	19.03	2.83	2.83	44.99	-2.87	0.47	0.02
150	19.17	2.83	2.83	31.64	-2.02	0.33	0.04
151	19.30	2.83	2.83	9.28	-0.59	0.10	0.05
152	19.40	2.83	2.83	1.30	14.22	0.15	0.04
153	19.53	2.83	2.83	-2.07	32.51	0.34	-0.03
154	19.67	2.83	2.83	-2.66	41.79	0.44	-0.01
155	19.80	2.83	2.83	-2.84	44.52	0.47	-0.01
156	19.93	2.83	2.83	-2.66	41.79	0.44	0.01
157	20.07	2.83	2.83	-2.07	32.51	0.34	0.03

158	20.20	2.83	2.83	1.30	14.22	0.15	-0.04
159	20.30	2.83	2.83	9.28	-0.59	0.10	-0.05
160	20.43	2.83	2.83	31.64	-2.02	0.33	-0.04
161	20.57	2.83	2.83	44.99	-2.87	0.47	-0.02
162	20.70	2.83	2.83	49.04	-3.13	0.52	-0.01
163	20.83	2.83	2.83	44.99	-2.87	0.47	0.02
164	20.97	2.83	2.83	31.64	-2.02	0.33	0.04
165	21.10	2.83	2.83	9.28	-0.59	0.10	0.05
166	21.20	2.83	2.83	1.30	14.22	0.15	0.04
167	21.33	2.83	2.83	-2.07	32.51	0.34	-0.03
168	21.47	2.83	2.83	-2.66	41.79	0.44	-0.01
169	21.60	2.83	2.83	-2.84	44.52	0.47	-0.01
170	21.73	2.83	2.83	-2.66	41.79	0.44	0.01
171	21.87	2.83	2.83	-2.07	32.51	0.34	0.03
172	22.00	2.83	2.83	1.30	14.22	0.15	-0.04
173	22.10	2.83	2.83	9.28	-0.59	0.10	-0.05
174	22.23	2.83	2.83	31.64	-2.02	0.33	-0.04
175	22.37	2.83	2.83	45.00	-2.87	0.47	-0.02
176	22.50	2.83	2.83	49.04	-3.13	0.52	-0.01
177	22.63	2.83	2.83	45.00	-2.87	0.47	0.02
178	22.77	2.83	2.83	31.65	-2.02	0.33	0.04
179	22.90	2.83	2.83	9.29	-0.59	0.10	0.05
180	23.00	2.83	2.83	1.30	14.21	0.15	0.04
181	23.13	2.83	2.83	-2.07	32.50	0.34	-0.03
182	23.27	2.83	2.83	-2.66	41.78	0.44	-0.01
183	23.40	2.83	2.83	-2.84	44.51	0.47	-0.01
184	23.53	2.83	2.83	-2.66	41.77	0.44	0.01
185	23.67	2.83	2.83	-2.07	32.49	0.34	0.03
186	23.80	2.83	2.83	1.30	14.20	0.15	-0.04
187	23.90	2.83	2.83	9.31	-0.59	0.10	-0.05
188	24.03	2.83	2.83	31.68	-2.02	0.33	-0.04
189	24.17	2.83	2.83	45.04	-2.87	0.47	-0.02
190	24.30	2.83	2.83	49.09	-3.13	0.52	-0.01
191	24.43	2.83	2.83	45.06	-2.87	0.47	0.02
192	24.57	2.83	2.83	31.72	-2.02	0.33	0.04
193	24.70	2.83	2.83	9.38	-0.60	0.10	0.05
194	24.80	2.83	2.83	1.30	14.12	0.15	0.04
195	24.93	2.83	2.83	-2.06	32.37	0.34	-0.03
196	25.07	2.83	2.83	-2.65	41.62	0.44	-0.01
197	25.20	2.83	2.83	-2.83	44.33	0.47	-0.01
198	25.33	2.83	2.83	-2.65	41.55	0.44	0.01
199	25.47	2.83	2.83	-2.05	32.22	0.34	0.03
200	25.60	2.83	2.83	1.31	13.91	0.15	-0.04
201	25.70	2.83	2.83	9.71	-0.62	0.10	-0.05
202	25.83	2.83	2.83	32.14	-2.05	0.34	-0.04
203	25.97	2.83	2.83	45.60	-2.91	0.48	-0.02
204	26.10	2.83	2.83	49.77	-3.17	0.52	-0.01
205	26.23	2.83	2.83	45.86	-2.92	0.48	0.02
206	26.37	2.83	2.83	32.69	-2.08	0.34	0.04
207	26.50	2.83	2.83	10.59	-0.68	0.11	0.05
208	26.60	2.83	2.83	1.31	12.92	0.14	0.04
209	26.73	2.83	2.83	-1.96	30.67	0.32	-0.03
210	26.87	2.83	2.83	-2.52	39.57	0.42	-0.01
211	27.00	2.83	2.83	-2.67	41.89	0.44	-0.01
212	27.13	2.83	2.83	-2.46	38.58	0.41	-0.01
213	27.27	2.83	2.83	-1.82	28.56	0.30	-0.03
214	27.40	2.83	2.83	1.31	10.08	0.11	-0.04
215	27.50	2.83	2.83	15.12	-0.96	0.16	-0.05
216	27.63	2.83	2.83	38.57	-2.46	0.41	-0.04
217	27.77	2.83	2.83	53.35	-3.40	0.56	-0.02
218	27.90	2.83	2.83	59.12	-3.77	0.62	-0.02
219	28.03	2.83	2.83	56.89	-3.63	0.60	-0.02
220	28.17	2.83	2.83	45.85	-2.92	0.48	-0.03
221	28.30	2.83	2.83	26.21	-1.67	0.28	-0.04
222	28.40	2.83	2.83	7.41	3.99	0.08	-0.05
223	28.53	2.83	2.83	-0.77	12.08	0.13	-0.05
224	28.67	2.83	2.83	-1.30	20.33	0.21	-0.03
225	28.80	2.83	2.83	-1.51	23.71	0.25	-0.02
226	28.93	2.83	2.83	-1.54	24.17	0.25	-0.02
227	29.07	2.83	2.83	-1.47	23.04	0.24	-0.01
228	29.20	2.83	2.83	-1.35	21.20	0.22	-0.01
229	29.33	2.83	2.83	-1.23	19.29	0.20	-0.01
230	29.47	2.83	2.83	-1.12	17.52	0.18	-0.01
231	29.60	2.83	2.83	-1.02	16.01	0.17	-0.01
232	29.73	2.83	2.83	-0.94	14.71	0.15	0.00
233	29.87	2.83	2.83	1.45	13.82	0.15	0.01
234	30.00	2.83	2.83	-0.56	8.79	0.09	0.01

Piastra fondazione valle

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	842.51	-53.72	8.85	-0.22
2	0.13	2.83	2.83	787.01	-50.18	8.27	-0.37
3	0.27	2.83	2.83	575.05	-36.67	6.04	-0.76
4	0.40	2.83	2.83	112.10	30.22	1.18	0.95
5	0.50	2.83	2.83	-19.09	299.40	3.15	-0.87
6	0.63	2.83	2.83	-36.39	570.69	6.00	-0.63
7	0.77	2.83	2.83	-44.10	691.65	7.27	-0.28
8	0.90	2.83	2.83	-45.94	720.39	7.57	0.12
9	1.03	2.83	2.83	-44.10	691.65	7.27	0.28
10	1.17	2.83	2.83	-36.39	570.69	6.00	0.63
11	1.30	2.83	2.83	-19.09	299.40	3.15	0.87
12	1.40	2.83	2.83	112.10	30.22	1.18	-0.95
13	1.53	2.83	2.83	575.05	-36.67	6.04	0.76
14	1.67	2.83	2.83	787.01	-50.18	8.27	0.37
15	1.80	2.83	2.83	842.51	-53.72	8.85	0.17
16	1.93	2.83	2.83	787.01	-50.18	8.27	-0.37
17	2.07	2.83	2.83	575.05	-36.67	6.04	-0.76
18	2.20	2.83	2.83	112.10	30.22	1.18	0.95
19	2.30	2.83	2.83	-19.09	299.40	3.15	-0.87
20	2.43	2.83	2.83	-36.39	570.69	6.00	-0.63
21	2.57	2.83	2.83	-44.10	691.65	7.27	-0.28
22	2.70	2.83	2.83	-45.94	720.39	7.57	0.12
23	2.83	2.83	2.83	-44.10	691.65	7.27	0.28
24	2.97	2.83	2.83	-36.39	570.69	6.00	0.63
25	3.10	2.83	2.83	-19.09	299.40	3.15	0.87
26	3.20	2.83	2.83	112.10	30.22	1.18	-0.95
27	3.33	2.83	2.83	575.05	-36.67	6.04	0.76
28	3.47	2.83	2.83	787.01	-50.18	8.27	0.37
29	3.60	2.83	2.83	842.51	-53.72	8.85	0.17
30	3.73	2.83	2.83	787.01	-50.18	8.27	-0.37
31	3.87	2.83	2.83	575.05	-36.67	6.04	-0.76
32	4.00	2.83	2.83	112.10	30.22	1.18	0.95
33	4.10	2.83	2.83	-19.09	299.40	3.15	-0.87
34	4.23	2.83	2.83	-36.39	570.69	6.00	-0.63
35	4.37	2.83	2.83	-44.10	691.65	7.27	-0.28
36	4.50	2.83	2.83	-45.94	720.39	7.57	-0.12
37	4.63	2.83	2.83	-44.10	691.65	7.27	0.28
38	4.77	2.83	2.83	-36.39	570.69	6.00	0.63
39	4.90	2.83	2.83	-19.09	299.40	3.15	0.87
40	5.00	2.83	2.83	112.10	30.22	1.18	-0.95
41	5.13	2.83	2.83	575.05	-36.67	6.04	0.76
42	5.27	2.83	2.83	787.01	-50.18	8.27	0.37
43	5.40	2.83	2.83	842.51	-53.72	8.85	-0.17
44	5.53	2.83	2.83	787.01	-50.18	8.27	-0.37
45	5.67	2.83	2.83	575.05	-36.67	6.04	-0.76
46	5.80	2.83	2.83	112.10	30.22	1.18	0.95
47	5.90	2.83	2.83	-19.09	299.40	3.15	-0.87
48	6.03	2.83	2.83	-36.39	570.69	6.00	-0.63
49	6.17	2.83	2.83	-44.10	691.65	7.27	-0.28
50	6.30	2.83	2.83	-45.94	720.39	7.57	0.12
51	6.43	2.83	2.83	-44.10	691.65	7.27	0.28
52	6.57	2.83	2.83	-36.39	570.69	6.00	0.63
53	6.70	2.83	2.83	-19.09	299.40	3.15	0.87
54	6.80	2.83	2.83	112.10	30.22	1.18	-0.95
55	6.93	2.83	2.83	575.05	-36.67	6.04	0.76
56	7.07	2.83	2.83	787.01	-50.18	8.27	0.37
57	7.20	2.83	2.83	842.51	-53.72	8.85	0.17
58	7.33	2.83	2.83	787.01	-50.18	8.27	-0.37
59	7.47	2.83	2.83	575.05	-36.67	6.04	-0.76
60	7.60	2.83	2.83	112.10	30.22	1.18	0.95
61	7.70	2.83	2.83	-19.09	299.40	3.15	-0.87
62	7.83	2.83	2.83	-36.39	570.69	6.00	-0.63
63	7.97	2.83	2.83	-44.10	691.65	7.27	-0.28
64	8.10	2.83	2.83	-45.94	720.39	7.57	0.12
65	8.23	2.83	2.83	-44.10	691.65	7.27	0.28
66	8.37	2.83	2.83	-36.39	570.69	6.00	0.63
67	8.50	2.83	2.83	-19.09	299.40	3.15	0.87
68	8.60	2.83	2.83	112.10	30.22	1.18	-0.95
69	8.73	2.83	2.83	575.05	-36.67	6.04	0.76
70	8.87	2.83	2.83	787.01	-50.18	8.27	0.37
71	9.00	2.83	2.83	842.51	-53.72	8.85	0.17
72	9.13	2.83	2.83	787.01	-50.18	8.27	-0.37
73	9.27	2.83	2.83	575.05	-36.67	6.04	-0.76

74	9.40	2.83	2.83	112.10	30.22	1.18	0.95
75	9.50	2.83	2.83	-19.09	299.40	3.15	-0.87
76	9.63	2.83	2.83	-36.39	570.69	6.00	-0.63
77	9.77	2.83	2.83	-44.10	691.65	7.27	-0.28
78	9.90	2.83	2.83	-45.94	720.39	7.57	-0.12
79	10.03	2.83	2.83	-44.10	691.65	7.27	0.28
80	10.17	2.83	2.83	-36.39	570.69	6.00	0.63
81	10.30	2.83	2.83	-19.09	299.40	3.15	0.87
82	10.40	2.83	2.83	112.10	30.22	1.18	-0.95
83	10.53	2.83	2.83	575.05	-36.67	6.04	0.76
84	10.67	2.83	2.83	787.01	-50.18	8.27	0.37
85	10.80	2.83	2.83	842.51	-53.72	8.85	-0.17
86	10.93	2.83	2.83	787.01	-50.18	8.27	-0.37
87	11.07	2.83	2.83	575.05	-36.67	6.04	-0.76
88	11.20	2.83	2.83	112.10	30.22	1.18	0.95
89	11.30	2.83	2.83	-19.09	299.40	3.15	-0.87
90	11.43	2.83	2.83	-36.39	570.69	6.00	-0.63
91	11.57	2.83	2.83	-44.10	691.65	7.27	-0.28
92	11.70	2.83	2.83	-45.94	720.39	7.57	0.12
93	11.83	2.83	2.83	-44.10	691.65	7.27	0.28
94	11.97	2.83	2.83	-36.39	570.69	6.00	0.63
95	12.10	2.83	2.83	-19.09	299.40	3.15	0.87
96	12.20	2.83	2.83	112.10	30.22	1.18	-0.95
97	12.33	2.83	2.83	575.05	-36.67	6.04	0.76
98	12.47	2.83	2.83	787.01	-50.18	8.27	0.37
99	12.60	2.83	2.83	842.51	-53.72	8.85	-0.17
100	12.73	2.83	2.83	787.01	-50.18	8.27	-0.37
101	12.87	2.83	2.83	575.05	-36.67	6.04	-0.76
102	13.00	2.83	2.83	112.10	30.22	1.18	0.95
103	13.10	2.83	2.83	-19.09	299.40	3.15	-0.87
104	13.23	2.83	2.83	-36.39	570.69	6.00	-0.63
105	13.37	2.83	2.83	-44.10	691.65	7.27	-0.28
106	13.50	2.83	2.83	-45.94	720.39	7.57	-0.12
107	13.63	2.83	2.83	-44.10	691.65	7.27	0.28
108	13.77	2.83	2.83	-36.39	570.69	6.00	0.63
109	13.90	2.83	2.83	-19.09	299.40	3.15	0.87
110	14.00	2.83	2.83	112.10	30.22	1.18	-0.95
111	14.13	2.83	2.83	575.05	-36.67	6.04	0.76
112	14.27	2.83	2.83	787.01	-50.18	8.27	0.37
113	14.40	2.83	2.83	842.51	-53.72	8.85	-0.17
114	14.53	2.83	2.83	787.01	-50.18	8.27	-0.37
115	14.67	2.83	2.83	575.05	-36.67	6.04	-0.76
116	14.80	2.83	2.83	112.10	30.22	1.18	0.95
117	14.90	2.83	2.83	-19.09	299.40	3.15	-0.87
118	15.03	2.83	2.83	-36.39	570.69	6.00	-0.63
119	15.17	2.83	2.83	-44.10	691.65	7.27	-0.28
120	15.30	2.83	2.83	-45.94	720.39	7.57	-0.12
121	15.43	2.83	2.83	-44.10	691.65	7.27	0.28
122	15.57	2.83	2.83	-36.39	570.69	6.00	0.63
123	15.70	2.83	2.83	-19.09	299.40	3.15	0.87
124	15.80	2.83	2.83	112.10	30.22	1.18	-0.95
125	15.93	2.83	2.83	575.05	-36.67	6.04	0.76
126	16.07	2.83	2.83	787.01	-50.18	8.27	0.37
127	16.20	2.83	2.83	842.51	-53.72	8.85	-0.17
128	16.33	2.83	2.83	787.01	-50.18	8.27	-0.37
129	16.47	2.83	2.83	575.05	-36.67	6.04	-0.76
130	16.60	2.83	2.83	112.10	30.22	1.18	0.95
131	16.70	2.83	2.83	-19.09	299.40	3.15	-0.87
132	16.83	2.83	2.83	-36.39	570.69	6.00	-0.63
133	16.97	2.83	2.83	-44.10	691.65	7.27	-0.28
134	17.10	2.83	2.83	-45.94	720.39	7.57	-0.12
135	17.23	2.83	2.83	-44.10	691.65	7.27	0.28
136	17.37	2.83	2.83	-36.39	570.69	6.00	0.63
137	17.50	2.83	2.83	-19.09	299.40	3.15	0.87
138	17.60	2.83	2.83	112.10	30.22	1.18	-0.95
139	17.73	2.83	2.83	575.05	-36.67	6.04	0.76
140	17.87	2.83	2.83	787.01	-50.18	8.27	0.37
141	18.00	2.83	2.83	842.51	-53.72	8.85	-0.17
142	18.13	2.83	2.83	787.01	-50.18	8.27	-0.37
143	18.27	2.83	2.83	575.05	-36.67	6.04	-0.76
144	18.40	2.83	2.83	112.10	30.22	1.18	0.95
145	18.50	2.83	2.83	-19.09	299.40	3.15	-0.87
146	18.63	2.83	2.83	-36.39	570.69	6.00	-0.63
147	18.77	2.83	2.83	-44.10	691.65	7.27	-0.28
148	18.90	2.83	2.83	-45.94	720.39	7.57	-0.12
149	19.03	2.83	2.83	-44.10	691.65	7.27	0.28
150	19.17	2.83	2.83	-36.39	570.69	6.00	0.63

151	19.30	2.83	2.83	-19.09	299.40	3.15	0.87
152	19.40	2.83	2.83	112.10	30.22	1.18	-0.95
153	19.53	2.83	2.83	575.05	-36.67	6.04	0.76
154	19.67	2.83	2.83	787.01	-50.18	8.27	0.37
155	19.80	2.83	2.83	842.51	-53.72	8.85	-0.17
156	19.93	2.83	2.83	787.01	-50.18	8.27	-0.37
157	20.07	2.83	2.83	575.05	-36.67	6.04	-0.76
158	20.20	2.83	2.83	112.10	30.22	1.18	0.95
159	20.30	2.83	2.83	-19.09	299.40	3.15	-0.87
160	20.43	2.83	2.83	-36.39	570.69	6.00	-0.63
161	20.57	2.83	2.83	-44.10	691.65	7.27	-0.28
162	20.70	2.83	2.83	-45.94	720.39	7.57	-0.12
163	20.83	2.83	2.83	-44.10	691.65	7.27	0.28
164	20.97	2.83	2.83	-36.39	570.69	6.00	0.63
165	21.10	2.83	2.83	-19.09	299.40	3.15	0.87
166	21.20	2.83	2.83	112.10	30.22	1.18	-0.95
167	21.33	2.83	2.83	575.05	-36.67	6.04	0.76
168	21.47	2.83	2.83	787.01	-50.18	8.27	0.37
169	21.60	2.83	2.83	842.51	-53.72	8.85	-0.17
170	21.73	2.83	2.83	787.01	-50.18	8.27	-0.37
171	21.87	2.83	2.83	575.05	-36.67	6.04	-0.76
172	22.00	2.83	2.83	112.10	30.22	1.18	0.95
173	22.10	2.83	2.83	-19.09	299.40	3.15	-0.87
174	22.23	2.83	2.83	-36.39	570.69	6.00	-0.63
175	22.37	2.83	2.83	-44.10	691.65	7.27	-0.28
176	22.50	2.83	2.83	-45.94	720.39	7.57	-0.12
177	22.63	2.83	2.83	-44.10	691.65	7.27	0.28
178	22.77	2.83	2.83	-36.39	570.69	6.00	0.63
179	22.90	2.83	2.83	-19.09	299.40	3.15	0.87
180	23.00	2.83	2.83	112.10	30.22	1.18	-0.95
181	23.13	2.83	2.83	575.05	-36.67	6.04	0.76
182	23.27	2.83	2.83	787.01	-50.18	8.27	0.37
183	23.40	2.83	2.83	842.51	-53.72	8.85	-0.17
184	23.53	2.83	2.83	787.01	-50.18	8.27	-0.37
185	23.67	2.83	2.83	575.05	-36.67	6.04	-0.76
186	23.80	2.83	2.83	112.10	30.22	1.18	0.95
187	23.90	2.83	2.83	-19.09	299.40	3.15	-0.87
188	24.03	2.83	2.83	-36.39	570.68	6.00	-0.63
189	24.17	2.83	2.83	-44.10	691.64	7.27	-0.28
190	24.30	2.83	2.83	-45.94	720.38	7.57	-0.12
191	24.43	2.83	2.83	-44.10	691.64	7.27	0.28
192	24.57	2.83	2.83	-36.39	570.67	6.00	0.63
193	24.70	2.83	2.83	-19.09	299.38	3.15	0.87
194	24.80	2.83	2.83	112.12	30.22	1.18	-0.95
195	24.93	2.83	2.83	575.08	-36.67	6.04	0.76
196	25.07	2.83	2.83	787.05	-50.19	8.27	0.37
197	25.20	2.83	2.83	842.56	-53.73	8.85	-0.17
198	25.33	2.83	2.83	787.07	-50.19	8.27	-0.37
199	25.47	2.83	2.83	575.13	-36.67	6.04	-0.76
200	25.60	2.83	2.83	112.19	30.22	1.18	0.95
201	25.70	2.83	2.83	-19.08	299.26	3.14	-0.87
202	25.83	2.83	2.83	-36.38	570.51	6.00	-0.63
203	25.97	2.83	2.83	-44.09	691.42	7.27	-0.28
204	26.10	2.83	2.83	-45.92	720.11	7.57	-0.12
205	26.23	2.83	2.83	-44.08	691.29	7.26	0.28
206	26.37	2.83	2.83	-36.36	570.22	5.99	0.63
207	26.50	2.83	2.83	-19.05	298.78	3.14	0.86
208	26.60	2.83	2.83	112.72	30.22	1.18	-0.95
209	26.73	2.83	2.83	576.03	-36.73	6.05	0.76
210	26.87	2.83	2.83	788.26	-50.26	8.28	0.37
211	27.00	2.83	2.83	844.13	-53.83	8.87	-0.17
212	27.13	2.83	2.83	788.99	-50.31	8.29	-0.37
213	27.27	2.83	2.83	577.64	-36.83	6.07	-0.76
214	27.40	2.83	2.83	114.91	30.19	1.21	0.95
215	27.50	2.83	2.83	-18.81	295.06	3.10	-0.87
216	27.63	2.83	2.83	-36.05	565.28	5.94	-0.64
217	27.77	2.83	2.83	-43.66	684.72	7.20	-0.29
218	27.90	2.83	2.83	-45.40	711.91	7.48	-0.13
219	28.03	2.83	2.83	-43.40	680.68	7.15	0.32
220	28.17	2.83	2.83	-35.47	556.31	5.85	0.62
221	28.30	2.83	2.83	-17.86	280.09	2.94	0.85
222	28.40	2.83	2.83	131.31	30.12	1.38	-0.98
223	28.53	2.83	2.83	606.36	-38.66	6.37	0.73
224	28.67	2.83	2.83	828.06	-52.80	8.70	0.33
225	28.80	2.83	2.83	896.99	-57.20	9.43	-0.20
226	28.93	2.83	2.83	856.35	-54.61	9.00	-0.37
227	29.07	2.83	2.83	668.85	-42.65	7.03	-0.84

228	29.20	2.83	2.83	237.02	26.12	2.49	-0.98
229	29.33	2.83	2.83	-13.45	210.91	2.22	-0.89
230	29.47	2.83	2.83	-24.51	384.35	4.04	-0.66
231	29.60	2.83	2.83	-26.64	417.81	4.39	-0.41
232	29.73	2.83	2.83	-23.64	370.75	3.90	-0.36
233	29.87	2.83	2.83	20.39	293.45	3.08	-0.35
234	30.00	2.83	2.83	31.50	5.88	0.33	-0.33

Verifiche a fessurazione

Combinazione n° 23

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

A_{fs} area di armatura in corrispondenza del lembo di monte in [cmq]
A_{fi} area di armatura in corrispondenza del lembo di valle in [cmq]

M_{pr} Momento di prima fessurazione espressa in [kgm]

M Momento agente nella sezione espressa in [kgm]

ε_m deformazione media espressa in [%]

s_m Distanza media tra le fessure espressa in [mm]

w Apertura media della fessura espressa in [mm]

Verifica fessurazione paramento

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	0.00	10.05	8.04	-2448	0	0.0000	0.00	0.000
2	0.13	10.05	8.04	-2552	-3	0.0000	0.00	0.000
3	0.25	10.05	8.04	-2659	-15	0.0000	0.00	0.000
4	0.38	10.05	8.04	-2767	-36	0.0000	0.00	0.000
5	0.50	10.05	8.04	-2878	-69	0.0000	0.00	0.000
6	0.63	14.07	8.04	-3106	-114	0.0000	0.00	0.000
7	0.75	14.07	8.04	-3224	-179	0.0000	0.00	0.000
8	0.88	14.07	8.04	-3344	-266	0.0000	0.00	0.000
9	1.00	14.07	8.04	-3466	-379	0.0000	0.00	0.000
10	1.13	14.07	8.04	-3590	-519	0.0000	0.00	0.000
11	1.25	14.07	8.04	-3716	-690	0.0000	0.00	0.000
12	1.38	14.07	8.04	-3844	-892	0.0000	0.00	0.000
13	1.50	14.07	8.04	-3974	-1129	0.0000	0.00	0.000
14	1.63	14.07	8.04	-4106	-1401	0.0000	0.00	0.000
15	1.75	14.07	8.04	-4241	-1710	0.0000	0.00	0.000
16	1.88	14.07	8.04	-4377	-2059	0.0000	0.00	0.000
17	2.00	28.15	16.08	-5101	-2450	0.0000	0.00	0.000
18	2.13	14.07	8.04	-4656	-2883	0.0000	0.00	0.000
19	2.25	14.07	8.04	-4798	-3360	0.0000	0.00	0.000
20	2.38	14.07	8.04	-4943	-3884	0.0000	0.00	0.000
21	2.50	14.07	8.04	-5090	-4456	0.0000	0.00	0.000

Verifica fessurazione fondazione

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	-1.06	8.04	8.04	-4193	-14	0.0000	0.00	0.000
2	-0.99	8.04	8.04	4193	197	0.0000	0.00	0.000
3	-0.93	8.04	8.04	4193	319	0.0000	0.00	0.000
4	-0.86	8.04	8.04	4193	494	0.0000	0.00	0.000
5	-0.79	8.04	8.04	4193	699	0.0000	0.00	0.000
6	-0.73	8.04	8.04	4193	915	0.0000	0.00	0.000
7	-0.66	8.04	8.04	4193	1213	0.0000	0.00	0.000
8	-0.60	8.04	8.04	4193	1781	0.0000	0.00	0.000
9	-0.55	8.04	8.04	4193	2487	0.0000	0.00	0.000
10	-0.49	8.04	8.04	4193	3354	0.0000	0.00	0.000
11	-0.43	8.04	10.05	4267	4408	0.0367	146.68	0.092
12	0.00	8.04	8.04	-4193	-2054	0.0000	0.00	0.000
13	0.04	8.04	8.04	-4193	-1858	0.0000	0.00	0.000
14	0.11	8.04	8.04	-4193	-1557	0.0000	0.00	0.000
15	0.17	8.04	8.04	-4193	-1284	0.0000	0.00	0.000
16	0.24	8.04	8.04	-4193	-1037	0.0000	0.00	0.000
17	0.31	8.04	8.04	-4193	-816	0.0000	0.00	0.000
18	0.37	8.04	8.04	-4193	-621	0.0000	0.00	0.000
19	0.44	8.04	8.04	-4193	-453	0.0000	0.00	0.000
20	0.51	8.04	8.04	-4193	-311	0.0000	0.00	0.000
21	0.57	8.04	8.04	-4193	-203	0.0000	0.00	0.000
22	0.64	8.04	8.04	-4193	-118	0.0000	0.00	0.000
23	0.71	8.04	8.04	-4193	-56	0.0000	0.00	0.000
24	0.77	8.04	8.04	-4193	-16	0.0000	0.00	0.000
25	0.84	8.04	8.04	4193	2	0.0000	0.00	0.000

Analisi dei pali

Combinazione n° 23

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	7392.4
Verticale	[kg]	10294.0
Momento	[kgm]	-5130.8

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.23528
Verticale	[cm]	0.00524
Rotazione	[°]	-0.00493

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]
1	32	896	6824	0
2	33	17848	6824	0

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 23

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
A _f	area di armatura espressa in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cm ²]
σ _f	tensione nell'acciaio espressa in [kg/cm ²]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cm ²]
σ _{stf}	tensione nelle staffe espressa in [kg/cm ²]

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _f	σ _c	σ _f
1	0.00	0	896	6824	52.28	0.15	2.31
2	0.23	-1535	1177	6783	52.28	4.68	116.41
3	0.45	-3062	1456	6746	52.28	9.36	251.18
4	0.68	-4580	1732	6712	52.28	14.02	385.35
5	0.90	-6090	2005	5515	52.28	18.65	518.90
6	1.13	-7331	2276	4426	52.28	22.45	627.65
7	1.35	-8327	2543	3442	52.28	25.51	713.83
8	1.57	-9101	2807	2556	52.28	27.88	779.61
9	1.80	-9676	3069	1765	52.28	29.64	827.04
10	2.02	-10073	3328	1063	52.28	30.85	858.09
11	2.25	-10312	3584	445	52.28	31.58	874.62
12	2.48	-10412	3837	-96	52.28	31.88	878.37
13	2.70	-10391	4087	-564	52.28	31.81	870.95
14	2.93	-10264	4335	-966	52.28	31.41	853.86
15	3.15	-10046	4580	-1307	52.28	30.73	828.51
16	3.38	-9752	4821	-1593	52.28	29.82	796.15
17	3.60	-9394	5060	-1829	52.28	28.71	757.93
18	3.83	-8982	5296	-2020	52.28	27.43	714.92
19	4.05	-8528	5530	-2171	52.28	26.02	668.04
20	4.28	-8039	5760	-2287	52.28	24.51	618.13
21	4.50	-7525	5988	-2372	52.28	22.91	565.94
22	4.73	-6991	6213	-2431	52.28	21.25	512.14
23	4.95	-6444	6435	-2467	52.28	19.54	457.31
24	5.17	-5889	6654	-2484	52.28	17.80	401.96
25	5.40	-5330	6870	-2484	52.28	16.05	346.56
26	5.63	-4771	7083	-2472	52.28	14.29	291.54
27	5.85	-4215	7294	-2449	52.28	12.53	237.38
28	6.08	-3664	7502	-2418	52.28	10.77	184.58
29	6.30	-3119	7776	-2253	52.28	9.02	132.79
30	6.53	-2612	8059	-2068	52.28	7.38	89.41
31	6.75	-2147	8341	-1870	52.28	5.93	73.93
32	6.98	-1726	8624	-1664	52.28	4.73	60.81
33	7.20	-1352	8907	-1455	52.28	3.86	50.94
34	7.42	-1024	9190	-1246	52.28	3.28	44.20
35	7.65	-744	9472	-1039	52.28	2.86	39.32

36	7.88	-510	9755	-836	52.28	2.52	35.38
37	8.10	-322	10038	-638	52.28	2.26	32.35
38	8.33	-179	10321	-447	52.28	2.07	30.22
39	8.55	-78	10603	-263	52.28	1.95	28.94
40	8.78	-19	10886	-85	52.28	1.91	28.48
41	9.00	0	11169	-85	52.28	1.92	28.83

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	σ _c	σ _r
1	0.00	0	17848	6824	52.28	3.07	46.07
2	0.23	-1535	18127	6783	52.28	5.66	77.47
3	0.45	-3062	18400	6746	52.28	8.56	112.15
4	0.68	-4580	18667	6712	52.28	12.59	158.07
5	0.90	-6090	18927	5515	52.28	17.20	208.44
6	1.13	-7331	19180	4426	52.28	21.09	297.05
7	1.35	-8327	19426	3442	52.28	24.22	377.18
8	1.57	-9101	19665	2556	52.28	26.64	439.91
9	1.80	-9676	19897	1765	52.28	28.44	485.98
10	2.02	-10073	20123	1063	52.28	29.67	516.76
11	2.25	-10312	20342	445	52.28	30.40	533.81
12	2.48	-10412	20554	-96	52.28	30.69	538.72
13	2.70	-10391	20759	-564	52.28	30.60	533.02
14	2.93	-10264	20958	-966	52.28	30.18	518.21
15	3.15	-10046	21150	-1307	52.28	29.47	495.67
16	3.38	-9752	21334	-1593	52.28	28.52	466.71
17	3.60	-9394	21513	-1829	52.28	27.37	432.55
18	3.83	-8982	21684	-2020	52.28	26.05	394.34
19	4.05	-8528	21849	-2171	52.28	24.59	353.18
20	4.28	-8039	22006	-2287	52.28	23.02	310.09
21	4.50	-7525	22157	-2372	52.28	21.38	266.11
22	4.73	-6991	22302	-2431	52.28	19.69	239.40
23	4.95	-6444	22439	-2467	52.28	17.97	221.08
24	5.17	-5889	22570	-2484	52.28	16.27	202.65
25	5.40	-5330	22694	-2484	52.28	14.62	184.49
26	5.63	-4771	22811	-2472	52.28	13.05	167.03
27	5.85	-4215	22921	-2449	52.28	11.61	150.72
28	6.08	-3664	23025	-2418	52.28	10.33	135.95
29	6.30	-3119	23287	-2253	52.28	9.25	123.30
30	6.53	-2612	23570	-2068	52.28	8.38	113.07
31	6.75	-2147	23853	-1870	52.28	7.66	104.48
32	6.98	-1726	24136	-1664	52.28	7.01	96.80
33	7.20	-1352	24418	-1455	52.28	6.44	90.05
34	7.42	-1024	24701	-1246	52.28	5.95	84.23
35	7.65	-744	24984	-1039	52.28	5.53	79.36
36	7.88	-510	25266	-836	52.28	5.19	75.42
37	8.10	-322	25549	-638	52.28	4.93	72.40
38	8.33	-179	25832	-447	52.28	4.74	70.26
39	8.55	-78	26115	-263	52.28	4.62	68.98
40	8.78	-19	26397	-85	52.28	4.57	68.53
41	9.00	0	26680	-85	52.28	4.59	68.87

COMBINAZIONE n° 24

Valore della spinta statica	5728.76	[kg]		
Componente orizzontale della spinta statica	5558.59	[kg]		
Componente verticale della spinta statica	1385.91	[kg]		
Punto d'applicazione della spinta	X = 0.84	[m]	Y = -1.78	[m]
Inclinaz. della spinta rispetto alla normale alla superficie	14.00	[°]		
Inclinazione linea di rottura in condizioni statiche	49.80	[°]		
Incremento sismico della spinta	728.03	[kg]		
Punto d'applicazione dell'incremento sismico di spinta	X = 0.84	[m]	Y = -1.45	[m]
Inclinazione linea di rottura in condizioni sismiche	44.05	[°]		
Peso terrapieno gravante sulla fondazione a monte	4095.00	[kg]		
Baricentro terrapieno gravante sulla fondazione a monte	X = 0.42	[m]	Y = -1.25	[m]
Inerzia del muro	343.73	[kg]		
Inerzia verticale del muro	-171.86	[kg]		
Inerzia del terrapieno fondazione di monte	336.30	[kg]		
Inerzia verticale del terrapieno fondazione di monte	-168.15	[kg]		

Risultanti

Risultante dei carichi applicati in dir. orizzontale	6945.02	[kg]
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Risultante dei carichi applicati in dir. verticale	9502.48	[kg]
Sforzo normale sul piano di posa della fondazione	9502.48	[kg]
Sforzo tangenziale sul piano di posa della fondazione	6945.02	[kg]
Eccentricità rispetto al baricentro della fondazione	0.50	[m]
Lunghezza fondazione reagente	1.35	[m]
Risultante in fondazione	11769.89	[kg]
Inclinazione della risultante (rispetto alla normale)	36.16	[°]
Momento rispetto al baricentro della fondazione	4752.69	[kgm]

Sollecitazioni paramento

Combinazione n° 24

L'ordinata Y (espressa in m) è considerata positiva verso il basso con origine in testa al muro

Momento positivo se tende le fibre contro terra (a monte), espresso in kgm

Sforzo normale positivo di compressione, espresso in kg

Taglio positivo se diretto da monte verso valle, espresso in kg

Nr.	Y	N	M	T
1	0.00	0.00	0.00	0.00
2	0.13	94.77	2.57	45.69
3	0.25	191.59	11.32	103.99
4	0.38	290.45	27.84	174.92
5	0.50	391.36	53.69	258.82
6	0.63	494.32	91.19	371.87
7	0.75	599.32	145.33	529.43
8	0.88	706.36	220.58	712.03
9	1.00	815.45	319.48	913.42
10	1.13	926.58	444.31	1132.37
11	1.25	1039.77	597.19	1367.95
12	1.38	1154.99	780.14	1619.45
13	1.50	1272.26	995.12	1886.32
14	1.63	1391.58	1244.00	2168.11
15	1.75	1512.94	1528.62	2464.46
16	1.88	1636.35	1850.78	2775.08
17	2.00	1761.80	2212.24	3099.74
18	2.13	1889.30	2614.74	3438.23
19	2.25	2018.84	3059.98	3790.41
20	2.38	2150.43	3549.66	4156.13
21	2.50	2284.06	4085.40	4533.17

Inviluppo sollecitazioni piastra di fondazione

Combinazione n° 24

Dimensioni della piastra(Simmetria)

Larghezza(m) = 30.00 Altezza(m) = 1.90

Origine all'attacco con il muro sull'asse di simmetria

Ascissa X positiva verso destra

Ordinata Y positiva dall'attacco con il muro verso l'estremo libero

I momenti negativi tendono le fibre superiori

Sollecitazioni in direzione Y

Nr.	Y	M _{ymin}	M _{ymax}	T _{ymin}	T _{ymax}
1	0.00	-12.80	2.51	-972.86	1852.87
2	0.07	-107.31	181.77	0.00	1806.16
3	0.13	-95.44	293.94	0.00	2398.79
4	0.20	0.00	455.27	0.00	4108.35
5	0.27	0.00	643.38	0.00	5821.80
6	0.33	0.00	841.94	0.00	7618.00
7	0.40	0.00	1115.55	0.00	9570.38
8	0.46	0.00	1638.83	-279.54	11596.62
9	0.52	0.00	2289.28	-1004.39	13830.19
10	0.57	0.00	3089.00	-2363.03	16257.37
11	0.63	0.00	4060.66	-2406.28	18031.45
12	1.06	-2056.23	0.00	-5006.92	0.00
13	1.10	-1859.93	0.00	-4772.01	0.00
14	1.17	-1559.31	0.00	-4335.33	0.00
15	1.23	-1286.25	0.00	-3928.28	0.00
16	1.30	-1039.09	0.00	-3529.03	0.00
17	1.37	-818.09	0.00	-3131.43	0.00
18	1.43	-623.38	0.00	-2734.98	0.00
19	1.50	-454.97	0.00	-2339.39	0.00
20	1.57	-312.88	0.00	-1944.52	0.00
21	1.63	-203.76	0.00	-1550.33	0.00
22	1.70	-118.03	0.00	-1156.81	0.00
23	1.77	-55.36	0.00	-764.05	0.00
24	1.83	-15.50	0.00	-417.41	0.00
25	1.90	0.00	2.21	-93.32	27.15

Sollecitazioni in direzione X

Nr.	X	M _{xmin}	M _{xmax}	T _{xmin}	T _{xmax}
1	0.00	-776.11	39.61	-858.81	308.75
2	0.13	-724.98	37.18	-2622.65	1748.75
3	0.27	-529.72	28.94	-4296.30	3709.73
4	0.40	-103.26	27.82	-4338.60	5081.07
5	0.50	-8.61	275.76	-4365.57	3491.32
6	0.63	-28.07	525.72	-3267.82	2026.72
7	0.77	-39.94	637.14	-1924.88	968.03
8	0.90	-43.53	663.62	-648.89	648.89
9	1.03	-39.94	637.14	-968.03	1924.88
10	1.17	-28.07	525.72	-2026.72	3267.82
11	1.30	-8.61	275.76	-3491.32	4365.57
12	1.40	-103.26	27.82	-5081.07	4338.60
13	1.53	-529.72	28.94	-3709.73	4296.30
14	1.67	-724.98	37.18	-1748.75	2622.65
15	1.80	-776.11	39.61	-858.81	858.81
16	1.93	-724.98	37.18	-2622.65	1748.75
17	2.07	-529.72	28.94	-4296.30	3709.73
18	2.20	-103.26	27.82	-4338.60	5081.07
19	2.30	-8.61	275.76	-4365.57	3491.32
20	2.43	-28.07	525.72	-3267.82	2026.72
21	2.57	-39.94	637.14	-1924.88	968.03
22	2.70	-43.53	663.62	-648.89	648.89
23	2.83	-39.94	637.14	-968.03	1924.88
24	2.97	-28.07	525.72	-2026.72	3267.82
25	3.10	-8.61	275.76	-3491.32	4365.57
26	3.20	-103.26	27.82	-5081.07	4338.60
27	3.33	-529.72	28.94	-3709.73	4296.30
28	3.47	-724.98	37.18	-1748.75	2622.65
29	3.60	-776.11	39.61	-858.81	858.81
30	3.73	-724.98	37.18	-2622.65	1748.75
31	3.87	-529.72	28.94	-4296.30	3709.73
32	4.00	-103.26	27.82	-4338.60	5081.07
33	4.10	-8.61	275.76	-4365.57	3491.32

34	4.23	-28.07	525.72	-3267.82	2026.72
35	4.37	-39.94	637.14	-1924.88	968.03
36	4.50	-43.53	663.62	-648.89	648.89
37	4.63	-39.94	637.14	-968.03	1924.88
38	4.77	-28.07	525.72	-2026.72	3267.82
39	4.90	-8.61	275.76	-3491.32	4365.57
40	5.00	-103.26	27.82	-5081.07	4338.60
41	5.13	-529.72	28.94	-3709.73	4296.30
42	5.27	-724.98	37.18	-1748.75	2622.65
43	5.40	-776.11	39.61	-858.81	858.81
44	5.53	-724.98	37.18	-2622.65	1748.75
45	5.67	-529.72	28.94	-4296.30	3709.73
46	5.80	-103.26	27.82	-4338.60	5081.07
47	5.90	-8.61	275.76	-4365.57	3491.32
48	6.03	-28.07	525.72	-3267.82	2026.72
49	6.17	-39.94	637.14	-1924.88	968.03
50	6.30	-43.53	663.62	-648.89	648.89
51	6.43	-39.94	637.14	-968.03	1924.88
52	6.57	-28.07	525.72	-2026.72	3267.82
53	6.70	-8.61	275.76	-3491.32	4365.57
54	6.80	-103.26	27.82	-5081.07	4338.60
55	6.93	-529.72	28.94	-3709.73	4296.30
56	7.07	-724.98	37.18	-1748.75	2622.65
57	7.20	-776.11	39.61	-858.81	858.81
58	7.33	-724.98	37.18	-2622.65	1748.75
59	7.47	-529.72	28.94	-4296.30	3709.73
60	7.60	-103.26	27.82	-4338.60	5081.07
61	7.70	-8.61	275.76	-4365.57	3491.32
62	7.83	-28.07	525.72	-3267.82	2026.72
63	7.97	-39.94	637.14	-1924.88	968.03
64	8.10	-43.53	663.62	-648.89	648.89
65	8.23	-39.94	637.14	-968.03	1924.88
66	8.37	-28.07	525.72	-2026.72	3267.82
67	8.50	-8.61	275.76	-3491.32	4365.57
68	8.60	-103.26	27.82	-5081.07	4338.60
69	8.73	-529.72	28.94	-3709.73	4296.30
70	8.87	-724.98	37.18	-1748.75	2622.65
71	9.00	-776.11	39.61	-858.81	858.81
72	9.13	-724.98	37.18	-2622.65	1748.75
73	9.27	-529.72	28.94	-4296.30	3709.73
74	9.40	-103.26	27.82	-4338.60	5081.07
75	9.50	-8.61	275.76	-4365.57	3491.32
76	9.63	-28.07	525.72	-3267.82	2026.72
77	9.77	-39.94	637.14	-1924.88	968.03
78	9.90	-43.53	663.62	-648.89	648.89
79	10.03	-39.94	637.14	-968.03	1924.88
80	10.17	-28.07	525.72	-2026.72	3267.82
81	10.30	-8.61	275.76	-3491.32	4365.57
82	10.40	-103.26	27.82	-5081.07	4338.60
83	10.53	-529.72	28.94	-3709.73	4296.30
84	10.67	-724.98	37.18	-1748.75	2622.65
85	10.80	-776.11	39.61	-858.81	858.81
86	10.93	-724.98	37.18	-2622.65	1748.75
87	11.07	-529.72	28.94	-4296.30	3709.73
88	11.20	-103.26	27.82	-4338.60	5081.07
89	11.30	-8.61	275.76	-4365.57	3491.32
90	11.43	-28.07	525.72	-3267.82	2026.72
91	11.57	-39.94	637.14	-1924.88	968.03
92	11.70	-43.53	663.62	-648.89	648.89
93	11.83	-39.94	637.14	-968.03	1924.88
94	11.97	-28.07	525.72	-2026.72	3267.82
95	12.10	-8.61	275.76	-3491.32	4365.57
96	12.20	-103.26	27.82	-5081.07	4338.60
97	12.33	-529.72	28.94	-3709.73	4296.30
98	12.47	-724.98	37.18	-1748.75	2622.65
99	12.60	-776.11	39.61	-858.81	858.81
100	12.73	-724.98	37.18	-2622.65	1748.75
101	12.87	-529.72	28.94	-4296.30	3709.73
102	13.00	-103.26	27.82	-4338.60	5081.07
103	13.10	-8.61	275.76	-4365.57	3491.32
104	13.23	-28.07	525.72	-3267.82	2026.72
105	13.37	-39.94	637.14	-1924.88	968.03
106	13.50	-43.53	663.62	-648.89	648.89
107	13.63	-39.94	637.14	-968.03	1924.88
108	13.77	-28.07	525.72	-2026.72	3267.82
109	13.90	-8.61	275.76	-3491.32	4365.57
110	14.00	-103.26	27.82	-5081.07	4338.60

111	14.13	-529.72	28.94	-3709.73	4296.30
112	14.27	-724.98	37.18	-1748.75	2622.65
113	14.40	-776.11	39.61	-858.81	858.81
114	14.53	-724.98	37.18	-2622.65	1748.75
115	14.67	-529.72	28.94	-4296.30	3709.73
116	14.80	-103.26	27.82	-4338.60	5081.07
117	14.90	-8.61	275.76	-4365.57	3491.32
118	15.03	-28.07	525.72	-3267.82	2026.72
119	15.17	-39.94	637.14	-1924.88	968.03
120	15.30	-43.53	663.62	-648.89	648.89
121	15.43	-39.94	637.14	-968.03	1924.88
122	15.57	-28.07	525.72	-2026.72	3267.82
123	15.70	-8.61	275.76	-3491.32	4365.57
124	15.80	-103.26	27.82	-5081.07	4338.60
125	15.93	-529.72	28.94	-3709.73	4296.30
126	16.07	-724.98	37.18	-1748.75	2622.65
127	16.20	-776.11	39.61	-858.81	858.81
128	16.33	-724.98	37.18	-2622.65	1748.75
129	16.47	-529.72	28.94	-4296.30	3709.73
130	16.60	-103.26	27.82	-4338.60	5081.07
131	16.70	-8.61	275.76	-4365.57	3491.32
132	16.83	-28.07	525.72	-3267.82	2026.72
133	16.97	-39.94	637.14	-1924.88	968.03
134	17.10	-43.53	663.62	-648.89	648.89
135	17.23	-39.94	637.14	-968.03	1924.88
136	17.37	-28.07	525.72	-2026.72	3267.82
137	17.50	-8.61	275.76	-3491.32	4365.57
138	17.60	-103.26	27.82	-5081.07	4338.60
139	17.73	-529.72	28.94	-3709.73	4296.30
140	17.87	-724.98	37.18	-1748.75	2622.65
141	18.00	-776.11	39.61	-858.81	858.81
142	18.13	-724.98	37.18	-2622.65	1748.75
143	18.27	-529.72	28.94	-4296.30	3709.73
144	18.40	-103.26	27.82	-4338.60	5081.07
145	18.50	-8.61	275.76	-4365.57	3491.32
146	18.63	-28.07	525.72	-3267.82	2026.72
147	18.77	-39.94	637.14	-1924.88	968.03
148	18.90	-43.53	663.62	-648.89	648.89
149	19.03	-39.94	637.14	-968.03	1924.88
150	19.17	-28.07	525.72	-2026.72	3267.82
151	19.30	-8.61	275.76	-3491.32	4365.57
152	19.40	-103.26	27.82	-5081.07	4338.60
153	19.53	-529.72	28.94	-3709.73	4296.30
154	19.67	-724.98	37.18	-1748.75	2622.65
155	19.80	-776.11	39.61	-858.81	858.81
156	19.93	-724.98	37.18	-2622.65	1748.75
157	20.07	-529.72	28.94	-4296.30	3709.73
158	20.20	-103.26	27.82	-4338.60	5081.07
159	20.30	-8.61	275.76	-4365.57	3491.32
160	20.43	-28.07	525.72	-3267.82	2026.72
161	20.57	-39.94	637.14	-1924.88	968.03
162	20.70	-43.53	663.62	-648.89	648.89
163	20.83	-39.94	637.14	-968.03	1924.88
164	20.97	-28.07	525.72	-2026.72	3267.82
165	21.10	-8.61	275.76	-3491.32	4365.57
166	21.20	-103.26	27.82	-5081.07	4338.60
167	21.33	-529.72	28.93	-3709.73	4296.30
168	21.47	-724.98	37.18	-1748.75	2622.65
169	21.60	-776.11	39.61	-858.81	858.81
170	21.73	-724.98	37.18	-2622.65	1748.75
171	21.87	-529.72	28.93	-4296.30	3709.73
172	22.00	-103.26	27.82	-4338.60	5081.07
173	22.10	-8.61	275.76	-4365.57	3491.32
174	22.23	-28.07	525.72	-3267.82	2026.72
175	22.37	-39.94	637.14	-1924.88	968.03
176	22.50	-43.54	663.62	-648.89	648.89
177	22.63	-39.94	637.14	-968.03	1924.87
178	22.77	-28.07	525.72	-2026.72	3267.82
179	22.90	-8.62	275.76	-3491.32	4365.57
180	23.00	-103.26	27.82	-5081.07	4338.60
181	23.13	-529.72	28.93	-3709.73	4296.29
182	23.27	-724.98	37.17	-1748.75	2622.64
183	23.40	-776.11	39.59	-858.82	858.81
184	23.53	-724.98	37.16	-2622.65	1748.73
185	23.67	-529.73	28.92	-4296.31	3709.71
186	23.80	-103.26	27.82	-4338.61	5081.07
187	23.90	-8.64	275.76	-4365.58	3491.31

188	24.03	-28.10	525.71	-3267.83	2026.71
189	24.17	-39.98	637.14	-1924.89	968.02
190	24.30	-43.58	663.61	-648.91	648.86
191	24.43	-40.00	637.13	-968.06	1924.84
192	24.57	-28.14	525.70	-2026.75	3267.77
193	24.70	-8.70	275.74	-3491.37	4365.51
194	24.80	-103.27	27.82	-5081.20	4338.54
195	24.93	-529.75	28.81	-3709.61	4296.21
196	25.07	-725.02	37.03	-1748.64	2622.54
197	25.20	-776.15	39.43	-858.99	858.67
198	25.33	-725.04	36.97	-2622.87	1748.11
199	25.47	-529.80	28.68	-4296.59	3709.15
200	25.60	-103.34	27.82	-4338.94	5081.10
201	25.70	-8.99	275.63	-4365.92	3491.06
202	25.83	-28.52	525.55	-3268.25	2026.38
203	25.97	-40.48	636.94	-1925.44	967.62
204	26.10	-44.18	663.36	-649.62	647.93
205	26.23	-40.70	636.81	-968.86	1923.67
206	26.37	-29.01	525.29	-2027.70	3266.25
207	26.50	-9.78	275.19	-3492.72	4363.64
208	26.60	-103.83	27.81	-5084.95	4336.68
209	26.73	-530.63	27.30	-3706.03	4293.76
210	26.87	-726.14	35.20	-1745.34	2619.39
211	27.00	-777.60	37.27	-864.20	854.62
212	27.13	-726.81	34.33	-2629.57	1729.32
213	27.27	-532.11	25.43	-4305.36	3692.01
214	27.40	-105.84	27.79	-4349.15	5082.18
215	27.50	-13.80	271.76	-4376.16	3483.44
216	27.63	-34.23	520.73	-3280.98	2016.54
217	27.77	-47.37	630.76	-1941.92	955.64
218	27.90	-52.49	655.80	-670.97	620.20
219	28.03	-50.52	627.04	-993.98	1888.98
220	28.17	-40.71	512.47	-2058.22	3221.66
221	28.30	-23.67	257.98	-3537.16	4309.42
222	28.40	-120.96	27.73	-5210.09	4282.74
223	28.53	-558.56	10.77	-3618.65	4222.78
224	28.67	-762.80	18.10	-1710.61	2528.36
225	28.80	-826.30	21.10	-1018.73	736.72
226	28.93	-788.86	21.52	-2838.43	1127.48
227	29.07	-616.14	20.54	-4594.28	3122.76
228	29.20	-218.34	24.06	-4568.89	5080.61
229	29.33	0.00	194.30	-4600.08	2887.83
230	29.47	0.00	354.07	-3563.37	1315.28
231	29.60	0.00	384.91	-2565.84	347.30
232	29.73	-0.13	341.58	-1887.29	9.76
233	29.87	-18.76	270.40	-1781.76	108.30
234	30.00	-28.91	8.75	-1814.37	103.16

Armature e tensioni nei materiali del muro

Combinazione n° 24

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta sul lembo di monte in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta sul lembo di valle in [kg/cmq]

Nr.	Y	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fs}	σ _{fi}
1	0.00	100, 30	10.05	8.04	0.00	0.00	0.00	0.00
2	0.13	100, 31	10.05	8.04	0.04	0.02	-0.25	-0.60
3	0.25	100, 31	10.05	8.04	0.12	0.04	-0.12	-1.58
4	0.38	100, 32	10.05	8.04	0.24	0.07	1.02	-3.16
5	0.50	100, 33	10.05	8.04	0.45	0.10	4.73	-5.61
6	0.63	100, 33	14.07	8.04	0.70	0.14	9.55	-8.57
7	0.75	100, 34	14.07	8.04	1.08	0.20	19.05	-12.75
8	0.88	100, 35	14.07	8.04	1.57	0.27	33.22	-18.15
9	1.00	100, 35	14.07	8.04	2.18	0.33	52.39	-24.82
10	1.13	100, 36	14.07	8.04	2.92	0.40	76.75	-32.78
11	1.25	100, 37	14.07	8.04	3.78	0.48	106.47	-42.06
12	1.38	100, 37	14.07	8.04	4.76	0.56	141.68	-52.68

13	1.50	100, 38	14.07	8.04	5.86	0.64	182.48	-64.63
14	1.63	100, 39	14.07	8.04	7.08	0.72	228.95	-77.93
15	1.75	100, 39	14.07	8.04	8.43	0.80	281.16	-92.58
16	1.88	100, 40	14.07	8.04	9.88	0.89	339.16	-108.56
17	2.00	100, 40	28.15	16.08	8.44	0.97	207.34	-99.82
18	2.13	100, 41	14.07	8.04	13.15	1.06	472.70	-144.51
19	2.25	100, 42	14.07	8.04	14.95	1.15	548.30	-164.45
20	2.38	100, 42	14.07	8.04	16.85	1.24	629.82	-185.68
21	2.50	100, 43	14.07	8.04	18.87	1.33	717.26	-208.19

Armature e tensioni nei materiali della fondazione

Combinazione n° 24

Simbologia adottata

B	base della sezione espressa in [cm]
H	altezza della sezione espressa in [cm]
A _{fi}	area di armatura in corrispondenza del lembo inferiore in [cmq]
A _{fs}	area di armatura in corrispondenza del lembo superiore in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{fi}	tensione nell'armatura disposta in corrispondenza del lembo inferiore in [kg/cmq]
σ _{fs}	tensione nell'armatura disposta in corrispondenza del lembo superiore in [kg/cmq]

Fondazione di valle

(L'ascissa X, espressa in [m], è positiva verso monte con origine in corrispondenza dell'estremo libero della fondazione di valle)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.08	0.20	0.91	4.63
2	0.07	100, 40	8.04	8.04	1.15	0.25	65.77	38.83
3	0.13	100, 40	8.04	8.04	1.86	0.56	106.36	34.53
4	0.20	100, 40	8.04	8.04	2.89	0.85	164.74	-26.45
5	0.27	100, 40	8.04	8.04	4.08	1.14	232.80	-37.37
6	0.33	100, 40	8.04	8.04	5.34	1.42	304.65	-48.91
7	0.40	100, 40	8.04	8.04	7.08	1.71	403.65	-64.80
8	0.46	100, 40	8.04	8.04	10.39	1.96	593.00	-95.20
9	0.52	100, 40	8.04	8.04	14.52	2.20	828.36	-132.98
10	0.57	100, 40	8.04	8.04	19.59	2.45	1117.73	-179.43
11	0.63	100, 40	8.04	10.05	23.60	2.68	1183.29	-229.31

Fondazione di monte

(L'ascissa X, espressa in [m], è positiva verso valle con origine in corrispondenza dell'estremo libero della fondazione di monte)

Nr.	X	B, H	A _{fs}	A _{fi}	σ _c	τ _c	σ _{fi}	σ _{fs}
1	0.00	100, 40	8.04	8.04	0.01	-0.02	0.80	-0.13
2	0.07	100, 40	8.04	8.04	0.10	-0.11	-0.90	5.61
3	0.13	100, 40	8.04	8.04	0.35	-0.23	-3.22	20.03
4	0.20	100, 40	8.04	8.04	0.75	-0.34	-6.86	42.71
5	0.27	100, 40	8.04	8.04	1.29	-0.45	-11.84	73.73
6	0.33	100, 40	8.04	8.04	1.98	-0.57	-18.17	113.21
7	0.40	100, 40	8.04	8.04	2.89	-0.68	-26.43	164.63
8	0.47	100, 40	8.04	8.04	3.95	-0.79	-36.21	225.56
9	0.53	100, 40	8.04	8.04	5.19	-0.91	-47.52	296.02
10	0.60	100, 40	8.04	8.04	6.59	-1.02	-60.36	375.99
11	0.67	100, 40	8.04	8.04	8.16	-1.13	-74.72	465.42
12	0.73	100, 40	8.04	8.04	9.89	-1.25	-90.58	564.23
13	0.80	100, 40	8.04	8.04	11.80	-1.36	-108.04	673.00
14	0.84	100, 40	8.04	8.04	13.04	-1.43	-119.44	744.03

Armature e tensioni piastre

Combinazione n° 24

X	ascissa sezione espressa in [m]
A _{fs}	area di armatura in corrispondenza del lembo di monte in [cmq]
A _{fi}	area di armatura in corrispondenza del lembo di valle in [cmq]
N _u	sforzo normale ultimo espresso in [kg]
M _u	momento ultimo espresso in [kgm]
CS	coefficiente sicurezza sezione

Piastra fondazione monte

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	-2.54	39.76	0.42	0.01
2	0.13	2.83	2.83	-2.38	37.32	0.39	0.01
3	0.27	2.83	2.83	-1.85	29.04	0.31	0.02

4	0.40	2.83	2.83	1.30	12.73	0.13	-0.03
5	0.50	2.83	2.83	8.64	0.61	0.09	-0.04
6	0.63	2.83	2.83	28.17	-1.80	0.30	-0.03
7	0.77	2.83	2.83	40.09	-2.56	0.42	-0.02
8	0.90	2.83	2.83	43.69	-2.79	0.46	0.01
9	1.03	2.83	2.83	40.09	-2.56	0.42	0.02
10	1.17	2.83	2.83	28.17	-1.80	0.30	0.03
11	1.30	2.83	2.83	8.64	0.61	0.09	0.04
12	1.40	2.83	2.83	1.30	12.73	0.13	0.03
13	1.53	2.83	2.83	-1.85	29.04	0.31	-0.02
14	1.67	2.83	2.83	-2.38	37.32	0.39	-0.01
15	1.80	2.83	2.83	-2.54	39.76	0.42	0.01
16	1.93	2.83	2.83	-2.38	37.32	0.39	0.01
17	2.07	2.83	2.83	-1.85	29.04	0.31	0.02
18	2.20	2.83	2.83	1.30	12.73	0.13	-0.03
19	2.30	2.83	2.83	8.64	0.61	0.09	-0.04
20	2.43	2.83	2.83	28.17	-1.80	0.30	-0.03
21	2.57	2.83	2.83	40.09	-2.56	0.42	-0.02
22	2.70	2.83	2.83	43.69	-2.79	0.46	0.01
23	2.83	2.83	2.83	40.09	-2.56	0.42	0.02
24	2.97	2.83	2.83	28.17	-1.80	0.30	0.03
25	3.10	2.83	2.83	8.64	0.61	0.09	0.04
26	3.20	2.83	2.83	1.30	12.73	0.13	0.03
27	3.33	2.83	2.83	-1.85	29.04	0.31	-0.02
28	3.47	2.83	2.83	-2.38	37.32	0.39	-0.01
29	3.60	2.83	2.83	-2.54	39.76	0.42	0.01
30	3.73	2.83	2.83	-2.38	37.32	0.39	0.01
31	3.87	2.83	2.83	-1.85	29.04	0.31	0.02
32	4.00	2.83	2.83	1.30	12.73	0.13	-0.03
33	4.10	2.83	2.83	8.64	0.61	0.09	-0.04
34	4.23	2.83	2.83	28.17	-1.80	0.30	-0.03
35	4.37	2.83	2.83	40.09	-2.56	0.42	-0.02
36	4.50	2.83	2.83	43.69	-2.79	0.46	0.01
37	4.63	2.83	2.83	40.09	-2.56	0.42	0.02
38	4.77	2.83	2.83	28.17	-1.80	0.30	0.03
39	4.90	2.83	2.83	8.64	0.61	0.09	0.04
40	5.00	2.83	2.83	1.30	12.73	0.13	0.03
41	5.13	2.83	2.83	-1.85	29.04	0.31	-0.02
42	5.27	2.83	2.83	-2.38	37.32	0.39	-0.01
43	5.40	2.83	2.83	-2.54	39.76	0.42	0.01
44	5.53	2.83	2.83	-2.38	37.32	0.39	0.01
45	5.67	2.83	2.83	-1.85	29.04	0.31	0.02
46	5.80	2.83	2.83	1.30	12.73	0.13	-0.03
47	5.90	2.83	2.83	8.64	0.61	0.09	-0.04
48	6.03	2.83	2.83	28.17	-1.80	0.30	-0.03
49	6.17	2.83	2.83	40.09	-2.56	0.42	-0.02
50	6.30	2.83	2.83	43.69	-2.79	0.46	0.01
51	6.43	2.83	2.83	40.09	-2.56	0.42	0.02
52	6.57	2.83	2.83	28.17	-1.80	0.30	0.03
53	6.70	2.83	2.83	8.64	0.61	0.09	0.04
54	6.80	2.83	2.83	1.30	12.73	0.13	0.03
55	6.93	2.83	2.83	-1.85	29.04	0.31	-0.02
56	7.07	2.83	2.83	-2.38	37.32	0.39	-0.01
57	7.20	2.83	2.83	-2.54	39.76	0.42	0.01
58	7.33	2.83	2.83	-2.38	37.32	0.39	0.01
59	7.47	2.83	2.83	-1.85	29.04	0.31	0.02
60	7.60	2.83	2.83	1.30	12.73	0.13	-0.03
61	7.70	2.83	2.83	8.64	0.61	0.09	-0.04
62	7.83	2.83	2.83	28.17	-1.80	0.30	-0.03
63	7.97	2.83	2.83	40.09	-2.56	0.42	-0.02
64	8.10	2.83	2.83	43.69	-2.79	0.46	-0.01
65	8.23	2.83	2.83	40.09	-2.56	0.42	0.02
66	8.37	2.83	2.83	28.17	-1.80	0.30	0.03
67	8.50	2.83	2.83	8.64	0.61	0.09	0.04
68	8.60	2.83	2.83	1.30	12.73	0.13	0.03
69	8.73	2.83	2.83	-1.85	29.04	0.31	-0.02
70	8.87	2.83	2.83	-2.38	37.32	0.39	-0.01
71	9.00	2.83	2.83	-2.54	39.76	0.42	-0.01
72	9.13	2.83	2.83	-2.38	37.32	0.39	0.01
73	9.27	2.83	2.83	-1.85	29.04	0.31	0.02
74	9.40	2.83	2.83	1.30	12.73	0.13	-0.03
75	9.50	2.83	2.83	8.64	0.61	0.09	-0.04
76	9.63	2.83	2.83	28.17	-1.80	0.30	-0.03
77	9.77	2.83	2.83	40.09	-2.56	0.42	-0.02
78	9.90	2.83	2.83	43.69	-2.79	0.46	-0.01
79	10.03	2.83	2.83	40.09	-2.56	0.42	0.02
80	10.17	2.83	2.83	28.17	-1.80	0.30	0.03

81	10.30	2.83	2.83	8.64	0.61	0.09	0.04
82	10.40	2.83	2.83	1.30	12.73	0.13	0.03
83	10.53	2.83	2.83	-1.85	29.04	0.31	-0.02
84	10.67	2.83	2.83	-2.38	37.32	0.39	-0.01
85	10.80	2.83	2.83	-2.54	39.76	0.42	-0.01
86	10.93	2.83	2.83	-2.38	37.32	0.39	0.01
87	11.07	2.83	2.83	-1.85	29.04	0.31	0.02
88	11.20	2.83	2.83	1.30	12.73	0.13	-0.03
89	11.30	2.83	2.83	8.64	0.61	0.09	-0.04
90	11.43	2.83	2.83	28.17	-1.80	0.30	-0.03
91	11.57	2.83	2.83	40.09	-2.56	0.42	-0.02
92	11.70	2.83	2.83	43.69	-2.79	0.46	-0.01
93	11.83	2.83	2.83	40.09	-2.56	0.42	0.02
94	11.97	2.83	2.83	28.17	-1.80	0.30	0.03
95	12.10	2.83	2.83	8.64	0.61	0.09	0.04
96	12.20	2.83	2.83	1.30	12.73	0.13	0.03
97	12.33	2.83	2.83	-1.85	29.04	0.31	-0.02
98	12.47	2.83	2.83	-2.38	37.32	0.39	-0.01
99	12.60	2.83	2.83	-2.54	39.76	0.42	-0.01
100	12.73	2.83	2.83	-2.38	37.32	0.39	0.01
101	12.87	2.83	2.83	-1.85	29.04	0.31	0.02
102	13.00	2.83	2.83	1.30	12.73	0.13	-0.03
103	13.10	2.83	2.83	8.64	0.61	0.09	-0.04
104	13.23	2.83	2.83	28.17	-1.80	0.30	-0.03
105	13.37	2.83	2.83	40.09	-2.56	0.42	-0.02
106	13.50	2.83	2.83	43.69	-2.79	0.46	-0.01
107	13.63	2.83	2.83	40.09	-2.56	0.42	0.02
108	13.77	2.83	2.83	28.17	-1.80	0.30	0.03
109	13.90	2.83	2.83	8.64	0.61	0.09	0.04
110	14.00	2.83	2.83	1.30	12.73	0.13	0.03
111	14.13	2.83	2.83	-1.85	29.04	0.31	-0.02
112	14.27	2.83	2.83	-2.38	37.32	0.39	-0.01
113	14.40	2.83	2.83	-2.54	39.76	0.42	-0.01
114	14.53	2.83	2.83	-2.38	37.32	0.39	0.01
115	14.67	2.83	2.83	-1.85	29.04	0.31	0.02
116	14.80	2.83	2.83	1.30	12.73	0.13	-0.03
117	14.90	2.83	2.83	8.64	0.61	0.09	-0.04
118	15.03	2.83	2.83	28.17	-1.80	0.30	-0.03
119	15.17	2.83	2.83	40.09	-2.56	0.42	-0.02
120	15.30	2.83	2.83	43.69	-2.79	0.46	-0.01
121	15.43	2.83	2.83	40.09	-2.56	0.42	0.02
122	15.57	2.83	2.83	28.17	-1.80	0.30	0.03
123	15.70	2.83	2.83	8.64	0.61	0.09	0.04
124	15.80	2.83	2.83	1.30	12.73	0.13	0.03
125	15.93	2.83	2.83	-1.85	29.04	0.31	-0.02
126	16.07	2.83	2.83	-2.38	37.32	0.39	-0.01
127	16.20	2.83	2.83	-2.54	39.76	0.42	-0.01
128	16.33	2.83	2.83	-2.38	37.32	0.39	0.01
129	16.47	2.83	2.83	-1.85	29.04	0.31	0.02
130	16.60	2.83	2.83	1.30	12.73	0.13	-0.03
131	16.70	2.83	2.83	8.64	0.61	0.09	-0.04
132	16.83	2.83	2.83	28.17	-1.80	0.30	-0.03
133	16.97	2.83	2.83	40.09	-2.56	0.42	-0.02
134	17.10	2.83	2.83	43.69	-2.79	0.46	-0.01
135	17.23	2.83	2.83	40.09	-2.56	0.42	0.02
136	17.37	2.83	2.83	28.17	-1.80	0.30	0.03
137	17.50	2.83	2.83	8.64	0.61	0.09	0.04
138	17.60	2.83	2.83	1.30	12.73	0.13	0.03
139	17.73	2.83	2.83	-1.85	29.04	0.31	-0.02
140	17.87	2.83	2.83	-2.38	37.32	0.39	-0.01
141	18.00	2.83	2.83	-2.54	39.76	0.42	-0.01
142	18.13	2.83	2.83	-2.38	37.32	0.39	0.01
143	18.27	2.83	2.83	-1.85	29.04	0.31	0.02
144	18.40	2.83	2.83	1.30	12.73	0.13	-0.03
145	18.50	2.83	2.83	8.64	0.61	0.09	-0.04
146	18.63	2.83	2.83	28.17	-1.80	0.30	-0.03
147	18.77	2.83	2.83	40.09	-2.56	0.42	-0.02
148	18.90	2.83	2.83	43.69	-2.79	0.46	-0.01
149	19.03	2.83	2.83	40.09	-2.56	0.42	0.02
150	19.17	2.83	2.83	28.17	-1.80	0.30	0.03
151	19.30	2.83	2.83	8.64	0.61	0.09	0.04
152	19.40	2.83	2.83	1.30	12.73	0.13	0.03
153	19.53	2.83	2.83	-1.85	29.04	0.31	-0.02
154	19.67	2.83	2.83	-2.38	37.32	0.39	-0.01
155	19.80	2.83	2.83	-2.54	39.75	0.42	-0.01
156	19.93	2.83	2.83	-2.38	37.32	0.39	0.01
157	20.07	2.83	2.83	-1.85	29.04	0.31	0.02

158	20.20	2.83	2.83	1.30	12.73	0.13	-0.03
159	20.30	2.83	2.83	8.64	0.61	0.09	-0.04
160	20.43	2.83	2.83	28.17	-1.80	0.30	-0.03
161	20.57	2.83	2.83	40.09	-2.56	0.42	-0.02
162	20.70	2.83	2.83	43.69	-2.79	0.46	-0.01
163	20.83	2.83	2.83	40.09	-2.56	0.42	0.02
164	20.97	2.83	2.83	28.17	-1.80	0.30	0.03
165	21.10	2.83	2.83	8.64	0.61	0.09	0.04
166	21.20	2.83	2.83	1.30	12.73	0.13	0.03
167	21.33	2.83	2.83	-1.85	29.04	0.31	-0.02
168	21.47	2.83	2.83	-2.38	37.32	0.39	-0.01
169	21.60	2.83	2.83	-2.53	39.75	0.42	-0.01
170	21.73	2.83	2.83	-2.38	37.32	0.39	0.01
171	21.87	2.83	2.83	-1.85	29.04	0.31	0.02
172	22.00	2.83	2.83	1.30	12.73	0.13	-0.03
173	22.10	2.83	2.83	8.65	0.61	0.09	-0.04
174	22.23	2.83	2.83	28.18	-1.80	0.30	-0.03
175	22.37	2.83	2.83	40.09	-2.56	0.42	-0.02
176	22.50	2.83	2.83	43.70	-2.79	0.46	-0.01
177	22.63	2.83	2.83	40.09	-2.56	0.42	0.02
178	22.77	2.83	2.83	28.18	-1.80	0.30	0.03
179	22.90	2.83	2.83	8.65	0.61	0.09	0.04
180	23.00	2.83	2.83	1.30	12.73	0.13	0.03
181	23.13	2.83	2.83	-1.85	29.03	0.31	-0.02
182	23.27	2.83	2.83	-2.38	37.31	0.39	-0.01
183	23.40	2.83	2.83	-2.53	39.74	0.42	-0.01
184	23.53	2.83	2.83	-2.38	37.30	0.39	0.01
185	23.67	2.83	2.83	-1.85	29.02	0.30	0.02
186	23.80	2.83	2.83	1.30	12.71	0.13	-0.03
187	23.90	2.83	2.83	8.67	0.61	0.09	-0.04
188	24.03	2.83	2.83	28.21	-1.80	0.30	-0.03
189	24.17	2.83	2.83	40.13	-2.56	0.42	-0.02
190	24.30	2.83	2.83	43.74	-2.79	0.46	-0.01
191	24.43	2.83	2.83	40.14	-2.56	0.42	0.02
192	24.57	2.83	2.83	28.25	-1.80	0.30	0.03
193	24.70	2.83	2.83	8.73	0.61	0.09	0.04
194	24.80	2.83	2.83	1.30	12.64	0.13	0.03
195	24.93	2.83	2.83	-1.84	28.92	0.30	-0.02
196	25.07	2.83	2.83	-2.37	37.17	0.39	-0.01
197	25.20	2.83	2.83	-2.52	39.58	0.42	-0.01
198	25.33	2.83	2.83	-2.37	37.11	0.39	0.01
199	25.47	2.83	2.83	-1.84	28.78	0.30	0.02
200	25.60	2.83	2.83	1.30	12.46	0.13	-0.03
201	25.70	2.83	2.83	9.02	0.61	0.09	-0.04
202	25.83	2.83	2.83	28.62	-1.83	0.30	-0.03
203	25.97	2.83	2.83	40.63	-2.59	0.43	-0.02
204	26.10	2.83	2.83	44.35	-2.83	0.47	-0.01
205	26.23	2.83	2.83	40.86	-2.61	0.43	0.02
206	26.37	2.83	2.83	29.11	-1.86	0.31	0.03
207	26.50	2.83	2.83	9.81	-0.63	0.10	0.04
208	26.60	2.83	2.83	1.30	11.57	0.12	0.03
209	26.73	2.83	2.83	-1.75	27.40	0.29	-0.02
210	26.87	2.83	2.83	-2.25	35.33	0.37	-0.01
211	27.00	2.83	2.83	-2.39	37.40	0.39	-0.01
212	27.13	2.83	2.83	-2.20	34.45	0.36	-0.01
213	27.27	2.83	2.83	-1.63	25.52	0.27	-0.02
214	27.40	2.83	2.83	1.31	9.04	0.10	-0.04
215	27.50	2.83	2.83	13.85	-0.88	0.15	-0.05
216	27.63	2.83	2.83	34.36	-2.19	0.36	-0.04
217	27.77	2.83	2.83	47.55	-3.03	0.50	-0.02
218	27.90	2.83	2.83	52.69	-3.36	0.55	-0.01
219	28.03	2.83	2.83	50.71	-3.23	0.53	-0.02
220	28.17	2.83	2.83	40.86	-2.61	0.43	-0.03
221	28.30	2.83	2.83	23.75	-1.51	0.25	-0.04
222	28.40	2.83	2.83	6.99	3.65	0.07	-0.04
223	28.53	2.83	2.83	-0.69	10.81	0.11	-0.04
224	28.67	2.83	2.83	-1.16	18.16	0.19	-0.03
225	28.80	2.83	2.83	-1.35	21.18	0.22	-0.02
226	28.93	2.83	2.83	-1.38	21.60	0.23	-0.02
227	29.07	2.83	2.83	-1.31	20.61	0.22	-0.01
228	29.20	2.83	2.83	-1.21	19.02	0.20	-0.01
229	29.33	2.83	2.83	-1.11	17.37	0.18	-0.01
230	29.47	2.83	2.83	-1.01	15.88	0.17	-0.01
231	29.60	2.83	2.83	-0.94	14.66	0.15	0.00
232	29.73	2.83	2.83	-0.87	13.66	0.14	0.00
233	29.87	2.83	2.83	1.42	13.02	0.14	0.01
234	30.00	2.83	2.83	-0.56	8.79	0.09	0.01

Piastra fondazione valle

Nr.	X	A _{fs}	A _{fi}	σ _{fs}	σ _{fi}	σ _c	τ _c
1	0.00	2.83	2.83	779.00	-49.67	8.19	-0.21
2	0.13	2.83	2.83	727.68	-46.40	7.65	-0.34
3	0.27	2.83	2.83	531.70	-33.90	5.59	-0.70
4	0.40	2.83	2.83	103.64	27.92	1.09	0.88
5	0.50	2.83	2.83	-17.65	276.79	2.91	-0.80
6	0.63	2.83	2.83	-33.65	527.68	5.55	-0.59
7	0.77	2.83	2.83	-40.78	639.52	6.72	-0.26
8	0.90	2.83	2.83	-42.47	666.09	7.00	0.12
9	1.03	2.83	2.83	-40.78	639.52	6.72	0.26
10	1.17	2.83	2.83	-33.65	527.68	5.55	0.59
11	1.30	2.83	2.83	-17.65	276.79	2.91	0.80
12	1.40	2.83	2.83	103.64	27.92	1.09	-0.88
13	1.53	2.83	2.83	531.70	-33.90	5.59	0.70
14	1.67	2.83	2.83	727.68	-46.40	7.65	0.34
15	1.80	2.83	2.83	779.00	-49.67	8.19	0.16
16	1.93	2.83	2.83	727.68	-46.40	7.65	-0.34
17	2.07	2.83	2.83	531.70	-33.90	5.59	-0.70
18	2.20	2.83	2.83	103.64	27.92	1.09	0.88
19	2.30	2.83	2.83	-17.65	276.79	2.91	-0.80
20	2.43	2.83	2.83	-33.65	527.68	5.55	-0.59
21	2.57	2.83	2.83	-40.78	639.52	6.72	-0.26
22	2.70	2.83	2.83	-42.47	666.09	7.00	0.12
23	2.83	2.83	2.83	-40.78	639.52	6.72	0.26
24	2.97	2.83	2.83	-33.65	527.68	5.55	0.59
25	3.10	2.83	2.83	-17.65	276.79	2.91	0.80
26	3.20	2.83	2.83	103.64	27.92	1.09	-0.88
27	3.33	2.83	2.83	531.70	-33.90	5.59	0.70
28	3.47	2.83	2.83	727.68	-46.40	7.65	0.34
29	3.60	2.83	2.83	779.00	-49.67	8.19	0.16
30	3.73	2.83	2.83	727.68	-46.40	7.65	-0.34
31	3.87	2.83	2.83	531.70	-33.90	5.59	-0.70
32	4.00	2.83	2.83	103.64	27.92	1.09	0.88
33	4.10	2.83	2.83	-17.65	276.79	2.91	-0.80
34	4.23	2.83	2.83	-33.65	527.68	5.55	-0.59
35	4.37	2.83	2.83	-40.78	639.52	6.72	-0.26
36	4.50	2.83	2.83	-42.47	666.09	7.00	-0.12
37	4.63	2.83	2.83	-40.78	639.52	6.72	0.26
38	4.77	2.83	2.83	-33.65	527.68	5.55	0.59
39	4.90	2.83	2.83	-17.65	276.79	2.91	0.80
40	5.00	2.83	2.83	103.64	27.92	1.09	-0.88
41	5.13	2.83	2.83	531.70	-33.90	5.59	0.70
42	5.27	2.83	2.83	727.68	-46.40	7.65	0.34
43	5.40	2.83	2.83	779.00	-49.67	8.19	-0.16
44	5.53	2.83	2.83	727.68	-46.40	7.65	-0.34
45	5.67	2.83	2.83	531.70	-33.90	5.59	-0.70
46	5.80	2.83	2.83	103.64	27.92	1.09	0.88
47	5.90	2.83	2.83	-17.65	276.79	2.91	-0.80
48	6.03	2.83	2.83	-33.65	527.68	5.55	-0.59
49	6.17	2.83	2.83	-40.78	639.52	6.72	-0.26
50	6.30	2.83	2.83	-42.47	666.09	7.00	-0.12
51	6.43	2.83	2.83	-40.78	639.52	6.72	0.26
52	6.57	2.83	2.83	-33.65	527.68	5.55	0.59
53	6.70	2.83	2.83	-17.65	276.79	2.91	0.80
54	6.80	2.83	2.83	103.64	27.92	1.09	-0.88
55	6.93	2.83	2.83	531.70	-33.90	5.59	0.70
56	7.07	2.83	2.83	727.68	-46.40	7.65	0.34
57	7.20	2.83	2.83	779.00	-49.67	8.19	-0.16
58	7.33	2.83	2.83	727.68	-46.40	7.65	-0.34
59	7.47	2.83	2.83	531.70	-33.90	5.59	-0.70
60	7.60	2.83	2.83	103.64	27.92	1.09	0.88
61	7.70	2.83	2.83	-17.65	276.79	2.91	-0.80
62	7.83	2.83	2.83	-33.65	527.68	5.55	-0.59
63	7.97	2.83	2.83	-40.78	639.52	6.72	-0.26
64	8.10	2.83	2.83	-42.47	666.09	7.00	0.12
65	8.23	2.83	2.83	-40.78	639.52	6.72	0.26
66	8.37	2.83	2.83	-33.65	527.68	5.55	0.59
67	8.50	2.83	2.83	-17.65	276.79	2.91	0.80
68	8.60	2.83	2.83	103.64	27.92	1.09	-0.88
69	8.73	2.83	2.83	531.70	-33.90	5.59	0.70
70	8.87	2.83	2.83	727.68	-46.40	7.65	0.34
71	9.00	2.83	2.83	779.00	-49.67	8.19	0.16
72	9.13	2.83	2.83	727.68	-46.40	7.65	-0.34
73	9.27	2.83	2.83	531.70	-33.90	5.59	-0.70

74	9.40	2.83	2.83	103.64	27.92	1.09	0.88
75	9.50	2.83	2.83	-17.65	276.79	2.91	-0.80
76	9.63	2.83	2.83	-33.65	527.68	5.55	-0.59
77	9.77	2.83	2.83	-40.78	639.52	6.72	-0.26
78	9.90	2.83	2.83	-42.47	666.09	7.00	-0.12
79	10.03	2.83	2.83	-40.78	639.52	6.72	0.26
80	10.17	2.83	2.83	-33.65	527.68	5.55	0.59
81	10.30	2.83	2.83	-17.65	276.79	2.91	0.80
82	10.40	2.83	2.83	103.64	27.92	1.09	-0.88
83	10.53	2.83	2.83	531.70	-33.90	5.59	0.70
84	10.67	2.83	2.83	727.68	-46.40	7.65	0.34
85	10.80	2.83	2.83	779.00	-49.67	8.19	0.16
86	10.93	2.83	2.83	727.68	-46.40	7.65	-0.34
87	11.07	2.83	2.83	531.70	-33.90	5.59	-0.70
88	11.20	2.83	2.83	103.64	27.92	1.09	0.88
89	11.30	2.83	2.83	-17.65	276.79	2.91	-0.80
90	11.43	2.83	2.83	-33.65	527.68	5.55	-0.59
91	11.57	2.83	2.83	-40.78	639.52	6.72	-0.26
92	11.70	2.83	2.83	-42.47	666.09	7.00	0.12
93	11.83	2.83	2.83	-40.78	639.52	6.72	0.26
94	11.97	2.83	2.83	-33.65	527.68	5.55	0.59
95	12.10	2.83	2.83	-17.65	276.79	2.91	0.80
96	12.20	2.83	2.83	103.64	27.92	1.09	-0.88
97	12.33	2.83	2.83	531.70	-33.90	5.59	0.70
98	12.47	2.83	2.83	727.68	-46.40	7.65	0.34
99	12.60	2.83	2.83	779.00	-49.67	8.19	-0.16
100	12.73	2.83	2.83	727.68	-46.40	7.65	-0.34
101	12.87	2.83	2.83	531.70	-33.90	5.59	-0.70
102	13.00	2.83	2.83	103.64	27.92	1.09	0.88
103	13.10	2.83	2.83	-17.65	276.79	2.91	-0.80
104	13.23	2.83	2.83	-33.65	527.68	5.55	-0.59
105	13.37	2.83	2.83	-40.78	639.52	6.72	-0.26
106	13.50	2.83	2.83	-42.47	666.09	7.00	-0.12
107	13.63	2.83	2.83	-40.78	639.52	6.72	0.26
108	13.77	2.83	2.83	-33.65	527.68	5.55	0.59
109	13.90	2.83	2.83	-17.65	276.79	2.91	0.80
110	14.00	2.83	2.83	103.64	27.92	1.09	-0.88
111	14.13	2.83	2.83	531.70	-33.90	5.59	0.70
112	14.27	2.83	2.83	727.68	-46.40	7.65	0.34
113	14.40	2.83	2.83	779.00	-49.67	8.19	-0.16
114	14.53	2.83	2.83	727.68	-46.40	7.65	-0.34
115	14.67	2.83	2.83	531.70	-33.90	5.59	-0.70
116	14.80	2.83	2.83	103.64	27.92	1.09	0.88
117	14.90	2.83	2.83	-17.65	276.79	2.91	-0.80
118	15.03	2.83	2.83	-33.65	527.68	5.55	-0.59
119	15.17	2.83	2.83	-40.78	639.52	6.72	-0.26
120	15.30	2.83	2.83	-42.47	666.09	7.00	-0.12
121	15.43	2.83	2.83	-40.78	639.52	6.72	0.26
122	15.57	2.83	2.83	-33.65	527.68	5.55	0.59
123	15.70	2.83	2.83	-17.65	276.79	2.91	0.80
124	15.80	2.83	2.83	103.64	27.92	1.09	-0.88
125	15.93	2.83	2.83	531.70	-33.90	5.59	0.70
126	16.07	2.83	2.83	727.68	-46.40	7.65	0.34
127	16.20	2.83	2.83	779.00	-49.67	8.19	-0.16
128	16.33	2.83	2.83	727.68	-46.40	7.65	-0.34
129	16.47	2.83	2.83	531.70	-33.90	5.59	-0.70
130	16.60	2.83	2.83	103.64	27.92	1.09	0.88
131	16.70	2.83	2.83	-17.65	276.79	2.91	-0.80
132	16.83	2.83	2.83	-33.65	527.68	5.55	-0.59
133	16.97	2.83	2.83	-40.78	639.52	6.72	-0.26
134	17.10	2.83	2.83	-42.47	666.09	7.00	-0.12
135	17.23	2.83	2.83	-40.78	639.52	6.72	0.26
136	17.37	2.83	2.83	-33.65	527.68	5.55	0.59
137	17.50	2.83	2.83	-17.65	276.79	2.91	0.80
138	17.60	2.83	2.83	103.64	27.92	1.09	-0.88
139	17.73	2.83	2.83	531.70	-33.90	5.59	0.70
140	17.87	2.83	2.83	727.68	-46.40	7.65	0.34
141	18.00	2.83	2.83	779.00	-49.67	8.19	-0.16
142	18.13	2.83	2.83	727.68	-46.40	7.65	-0.34
143	18.27	2.83	2.83	531.70	-33.90	5.59	-0.70
144	18.40	2.83	2.83	103.64	27.92	1.09	0.88
145	18.50	2.83	2.83	-17.65	276.79	2.91	-0.80
146	18.63	2.83	2.83	-33.65	527.68	5.55	-0.59
147	18.77	2.83	2.83	-40.78	639.52	6.72	-0.26
148	18.90	2.83	2.83	-42.47	666.09	7.00	-0.12
149	19.03	2.83	2.83	-40.78	639.52	6.72	0.26
150	19.17	2.83	2.83	-33.65	527.68	5.55	0.59

151	19.30	2.83	2.83	-17.65	276.79	2.91	0.80
152	19.40	2.83	2.83	103.64	27.92	1.09	-0.88
153	19.53	2.83	2.83	531.70	-33.90	5.59	0.70
154	19.67	2.83	2.83	727.68	-46.40	7.65	0.34
155	19.80	2.83	2.83	779.00	-49.67	8.19	-0.16
156	19.93	2.83	2.83	727.68	-46.40	7.65	-0.34
157	20.07	2.83	2.83	531.70	-33.90	5.59	-0.70
158	20.20	2.83	2.83	103.64	27.92	1.09	0.88
159	20.30	2.83	2.83	-17.65	276.79	2.91	-0.80
160	20.43	2.83	2.83	-33.65	527.68	5.55	-0.59
161	20.57	2.83	2.83	-40.78	639.52	6.72	-0.26
162	20.70	2.83	2.83	-42.47	666.09	7.00	-0.12
163	20.83	2.83	2.83	-40.78	639.52	6.72	0.26
164	20.97	2.83	2.83	-33.65	527.68	5.55	0.59
165	21.10	2.83	2.83	-17.65	276.79	2.91	0.80
166	21.20	2.83	2.83	103.64	27.92	1.09	-0.88
167	21.33	2.83	2.83	531.70	-33.90	5.59	0.70
168	21.47	2.83	2.83	727.68	-46.40	7.65	0.34
169	21.60	2.83	2.83	779.00	-49.67	8.19	-0.16
170	21.73	2.83	2.83	727.68	-46.40	7.65	-0.34
171	21.87	2.83	2.83	531.70	-33.90	5.59	-0.70
172	22.00	2.83	2.83	103.64	27.92	1.09	0.88
173	22.10	2.83	2.83	-17.65	276.79	2.91	-0.80
174	22.23	2.83	2.83	-33.65	527.68	5.55	-0.59
175	22.37	2.83	2.83	-40.78	639.52	6.72	-0.26
176	22.50	2.83	2.83	-42.47	666.09	7.00	-0.12
177	22.63	2.83	2.83	-40.78	639.52	6.72	0.26
178	22.77	2.83	2.83	-33.65	527.68	5.55	0.59
179	22.90	2.83	2.83	-17.65	276.79	2.91	0.80
180	23.00	2.83	2.83	103.64	27.92	1.09	-0.88
181	23.13	2.83	2.83	531.70	-33.90	5.59	0.70
182	23.27	2.83	2.83	727.68	-46.40	7.65	0.34
183	23.40	2.83	2.83	779.00	-49.67	8.19	-0.16
184	23.53	2.83	2.83	727.68	-46.40	7.65	-0.34
185	23.67	2.83	2.83	531.70	-33.90	5.59	-0.70
186	23.80	2.83	2.83	103.64	27.92	1.09	0.88
187	23.90	2.83	2.83	-17.65	276.79	2.91	-0.80
188	24.03	2.83	2.83	-33.65	527.67	5.55	-0.59
189	24.17	2.83	2.83	-40.78	639.51	6.72	-0.26
190	24.30	2.83	2.83	-42.47	666.08	7.00	-0.12
191	24.43	2.83	2.83	-40.78	639.51	6.72	0.26
192	24.57	2.83	2.83	-33.65	527.66	5.54	0.59
193	24.70	2.83	2.83	-17.65	276.77	2.91	0.80
194	24.80	2.83	2.83	103.66	27.92	1.09	-0.88
195	24.93	2.83	2.83	531.73	-33.91	5.59	0.70
196	25.07	2.83	2.83	727.72	-46.40	7.65	0.34
197	25.20	2.83	2.83	779.05	-49.68	8.19	-0.16
198	25.33	2.83	2.83	727.74	-46.41	7.65	-0.34
199	25.47	2.83	2.83	531.78	-33.91	5.59	-0.70
200	25.60	2.83	2.83	103.73	27.92	1.09	0.88
201	25.70	2.83	2.83	-17.64	276.66	2.91	-0.80
202	25.83	2.83	2.83	-33.64	527.51	5.54	-0.59
203	25.97	2.83	2.83	-40.77	639.31	6.72	-0.26
204	26.10	2.83	2.83	-42.46	665.83	7.00	-0.12
205	26.23	2.83	2.83	-40.76	639.19	6.72	0.26
206	26.37	2.83	2.83	-33.62	527.24	5.54	0.58
207	26.50	2.83	2.83	-17.61	276.21	2.90	0.80
208	26.60	2.83	2.83	104.21	27.92	1.10	-0.88
209	26.73	2.83	2.83	532.61	-33.96	5.60	0.70
210	26.87	2.83	2.83	728.84	-46.48	7.66	0.34
211	27.00	2.83	2.83	780.50	-49.77	8.20	-0.16
212	27.13	2.83	2.83	729.52	-46.52	7.67	-0.34
213	27.27	2.83	2.83	534.09	-34.06	5.61	-0.70
214	27.40	2.83	2.83	106.24	27.90	1.12	0.88
215	27.50	2.83	2.83	-17.39	272.78	2.87	-0.80
216	27.63	2.83	2.83	-33.33	522.67	5.49	-0.59
217	27.77	2.83	2.83	-40.37	633.11	6.65	-0.27
218	27.90	2.83	2.83	-41.97	658.25	6.92	-0.12
219	28.03	2.83	2.83	-40.13	629.38	6.61	0.29
220	28.17	2.83	2.83	-32.80	514.38	5.41	0.57
221	28.30	2.83	2.83	-16.51	258.94	2.72	0.78
222	28.40	2.83	2.83	121.41	27.83	1.28	-0.91
223	28.53	2.83	2.83	560.65	-35.75	5.89	0.67
224	28.67	2.83	2.83	765.64	-48.82	8.05	0.30
225	28.80	2.83	2.83	829.38	-52.89	8.72	-0.18
226	28.93	2.83	2.83	791.80	-50.49	8.32	-0.34
227	29.07	2.83	2.83	618.44	-39.44	6.50	-0.78

228	29.20	2.83	2.83	219.16	24.15	2.30	-0.91
229	29.33	2.83	2.83	-12.44	195.02	2.05	-0.82
230	29.47	2.83	2.83	-22.66	355.39	3.73	-0.61
231	29.60	2.83	2.83	-24.64	386.35	4.06	-0.38
232	29.73	2.83	2.83	-21.86	342.85	3.60	-0.33
233	29.87	2.83	2.83	18.83	271.40	2.85	-0.32
234	30.00	2.83	2.83	29.02	5.54	0.30	-0.31

Verifiche a fessurazione

Combinazione n° 24

L'ordinata Y (espressa in [m]) è considerata positiva verso il basso con origine in testa al muro

A_{fs} area di armatura in corrispondenza del lembo di monte in [cmq]

A_{fi} area di armatura in corrispondenza del lembo di valle in [cmq]

M_{pr} Momento di prima fessurazione espressa in [kgm]

M Momento agente nella sezione espressa in [kgm]

ε_m deformazione media espressa in [%]

s_m Distanza media tra le fessure espressa in [mm]

w Apertura media della fessura espressa in [mm]

Verifica fessurazione paramento

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	0.00	10.05	8.04	-2448	0	0.0000	0.00	0.000
2	0.13	10.05	8.04	-2552	-3	0.0000	0.00	0.000
3	0.25	10.05	8.04	-2659	-11	0.0000	0.00	0.000
4	0.38	10.05	8.04	-2767	-28	0.0000	0.00	0.000
5	0.50	10.05	8.04	-2878	-54	0.0000	0.00	0.000
6	0.63	14.07	8.04	-3106	-91	0.0000	0.00	0.000
7	0.75	14.07	8.04	-3224	-145	0.0000	0.00	0.000
8	0.88	14.07	8.04	-3344	-221	0.0000	0.00	0.000
9	1.00	14.07	8.04	-3466	-319	0.0000	0.00	0.000
10	1.13	14.07	8.04	-3590	-444	0.0000	0.00	0.000
11	1.25	14.07	8.04	-3716	-597	0.0000	0.00	0.000
12	1.38	14.07	8.04	-3844	-780	0.0000	0.00	0.000
13	1.50	14.07	8.04	-3974	-995	0.0000	0.00	0.000
14	1.63	14.07	8.04	-4106	-1244	0.0000	0.00	0.000
15	1.75	14.07	8.04	-4241	-1529	0.0000	0.00	0.000
16	1.88	14.07	8.04	-4377	-1851	0.0000	0.00	0.000
17	2.00	28.15	16.08	-5101	-2212	0.0000	0.00	0.000
18	2.13	14.07	8.04	-4656	-2615	0.0000	0.00	0.000
19	2.25	14.07	8.04	-4798	-3060	0.0000	0.00	0.000
20	2.38	14.07	8.04	-4943	-3550	0.0000	0.00	0.000
21	2.50	14.07	8.04	-5090	-4085	0.0000	0.00	0.000

Verifica fessurazione fondazione

N°	Y	A _{fs}	A _{fi}	M _{pr}	M	ε _m	s _m	w
1	-1.06	8.04	8.04	-4193	-13	0.0000	0.00	0.000
2	-0.99	8.04	8.04	4193	182	0.0000	0.00	0.000
3	-0.93	8.04	8.04	4193	294	0.0000	0.00	0.000
4	-0.86	8.04	8.04	4193	455	0.0000	0.00	0.000
5	-0.79	8.04	8.04	4193	643	0.0000	0.00	0.000
6	-0.73	8.04	8.04	4193	842	0.0000	0.00	0.000
7	-0.66	8.04	8.04	4193	1116	0.0000	0.00	0.000
8	-0.60	8.04	8.04	4193	1639	0.0000	0.00	0.000
9	-0.55	8.04	8.04	4193	2289	0.0000	0.00	0.000
10	-0.49	8.04	8.04	4193	3089	0.0000	0.00	0.000
11	-0.43	8.04	10.05	4267	4061	0.0000	0.00	0.000
12	0.00	8.04	8.04	-4193	-2056	0.0000	0.00	0.000
13	0.04	8.04	8.04	-4193	-1860	0.0000	0.00	0.000
14	0.11	8.04	8.04	-4193	-1559	0.0000	0.00	0.000
15	0.17	8.04	8.04	-4193	-1286	0.0000	0.00	0.000
16	0.24	8.04	8.04	-4193	-1039	0.0000	0.00	0.000
17	0.31	8.04	8.04	-4193	-818	0.0000	0.00	0.000
18	0.37	8.04	8.04	-4193	-623	0.0000	0.00	0.000
19	0.44	8.04	8.04	-4193	-455	0.0000	0.00	0.000
20	0.51	8.04	8.04	-4193	-313	0.0000	0.00	0.000
21	0.57	8.04	8.04	-4193	-204	0.0000	0.00	0.000
22	0.64	8.04	8.04	-4193	-118	0.0000	0.00	0.000
23	0.71	8.04	8.04	-4193	-55	0.0000	0.00	0.000
24	0.77	8.04	8.04	-4193	-16	0.0000	0.00	0.000
25	0.84	8.04	8.04	4193	2	0.0000	0.00	0.000

Analisi dei pali

Combinazione n° 24

Risultanti sulla base della fondazione (per metro lineare di muro)

Orizzontale	[kg]	6945.0
Verticale	[kg]	9502.5
Momento	[kgm]	-4752.7

Spostamenti della piastra di fondazione

Orizzontale	[cm]	0.22104
Verticale	[cm]	0.00483
Rotazione	[°]	-0.00457

Scarichi in testa ai pali

Fila nr.	N.pali	N [kg]	T [kg]	M [kgm]
1	32	799	6411	0
2	33	16502	6411	0

Sollecitazioni nei pali e verifiche delle sezioni

Combinazione n° 24

Nr.	numero d'ordine della sezione a partire dall'attacco palo-fondazione
Y	ordinata della sezione a partire dall'attacco palo-fondazione positiva verso il basso (in [m])
M	momento flettente espresso in [kgm]
N	sforzo normale espresso in [kg]
T	taglio espresso in [kg]
A _f	area di armatura espressa in [cmq]
σ _c	tensione nel calcestruzzo espressa in [kg/cmq]
σ _f	tensione nell'acciaio espressa in [kg/cmq]
τ _c	tensione tangenziale nel calcestruzzo espressa in [kg/cmq]
σ _{stf}	tensione nelle staffe espressa in [kg/cmq]

Sollecitazioni e tensioni per la fila di pali nr. 1

Nr.	Y	M	N	T	A _f	σ _c	σ _f
1	0.00	0	799	6411	52.28	0.14	2.06
2	0.23	-1442	1081	6373	52.28	4.39	109.91
3	0.45	-2876	1359	6338	52.28	8.80	236.17
4	0.68	-4302	1636	6306	52.28	13.17	361.85
5	0.90	-5721	1909	5181	52.28	17.52	486.96
6	1.13	-6887	2179	4159	52.28	21.09	588.77
7	1.35	-7823	2447	3233	52.28	23.96	669.38
8	1.57	-8550	2711	2401	52.28	26.19	730.83
9	1.80	-9091	2973	1658	52.28	27.84	775.04
10	2.02	-9464	3232	999	52.28	28.98	803.88
11	2.25	-9688	3488	418	52.28	29.66	819.07
12	2.48	-9782	3742	-90	52.28	29.95	822.25
13	2.70	-9762	3992	-530	52.28	29.88	814.95
14	2.93	-9643	4240	-908	52.28	29.50	798.58
15	3.15	-9438	4485	-1228	52.28	28.87	774.44
16	3.38	-9162	4727	-1497	52.28	28.01	743.72
17	3.60	-8825	4966	-1718	52.28	26.96	707.52
18	3.83	-8439	5203	-1898	52.28	25.76	666.80
19	4.05	-8012	5437	-2040	52.28	24.44	622.47
20	4.28	-7553	5667	-2149	52.28	23.01	575.30
21	4.50	-7069	5895	-2229	52.28	21.51	526.01
22	4.73	-6568	6121	-2284	52.28	19.94	475.21
23	4.95	-6054	6343	-2318	52.28	18.34	423.46
24	5.17	-5532	6563	-2333	52.28	16.70	371.26
25	5.40	-5007	6779	-2334	52.28	15.05	319.04
26	5.63	-4482	6993	-2323	52.28	13.39	267.24
27	5.85	-3960	7205	-2301	52.28	11.73	216.31
28	6.08	-3442	7413	-2272	52.28	10.08	166.80
29	6.30	-2931	7687	-2117	52.28	8.43	118.43
30	6.53	-2454	7970	-1943	52.28	6.90	84.08
31	6.75	-2017	8253	-1757	52.28	5.55	69.64
32	6.98	-1622	8535	-1564	52.28	4.46	57.63
33	7.20	-1270	8818	-1367	52.28	3.68	48.76
34	7.42	-962	9101	-1170	52.28	3.16	42.72
35	7.65	-699	9384	-976	52.28	2.77	38.19

36	7.88	-480	9666	-785	52.28	2.46	34.54
37	8.10	-303	9949	-600	52.28	2.21	31.74
38	8.33	-168	10232	-420	52.28	2.04	29.77
39	8.55	-74	10515	-247	52.28	1.93	28.61
40	8.78	-18	10797	-80	52.28	1.89	28.23
41	9.00	0	11080	-80	52.28	1.91	28.60

Sollecitazioni e tensioni per la fila di pali nr. 2

Nr.	Y	M	N	T	A _r	σ _c	σ _r
1	0.00	0	16502	6411	52.28	2.84	42.60
2	0.23	-1442	16782	6373	52.28	5.28	72.15
3	0.45	-2876	17056	6338	52.28	8.02	104.98
4	0.68	-4302	17323	6306	52.28	11.84	148.40
5	0.90	-5721	17584	5181	52.28	16.18	195.79
6	1.13	-6887	17838	4159	52.28	19.84	282.04
7	1.35	-7823	18086	3233	52.28	22.77	357.22
8	1.57	-8550	18327	2401	52.28	25.05	415.94
9	1.80	-9091	18562	1658	52.28	26.73	458.97
10	2.02	-9464	18790	999	52.28	27.88	487.61
11	2.25	-9688	19012	418	52.28	28.57	503.34
12	2.48	-9782	19227	-90	52.28	28.84	507.65
13	2.70	-9762	19436	-530	52.28	28.76	502.00
14	2.93	-9643	19639	-908	52.28	28.36	487.78
15	3.15	-9438	19835	-1228	52.28	27.69	466.31
16	3.38	-9162	20024	-1497	52.28	26.80	438.81
17	3.60	-8825	20207	-1718	52.28	25.71	406.44
18	3.83	-8439	20383	-1898	52.28	24.47	370.28
19	4.05	-8012	20554	-2040	52.28	23.10	331.36
20	4.28	-7553	20717	-2149	52.28	21.62	290.65
21	4.50	-7069	20874	-2229	52.28	20.08	249.14
22	4.73	-6568	21025	-2284	52.28	18.49	224.92
23	4.95	-6054	21169	-2318	52.28	16.88	207.72
24	5.17	-5532	21307	-2333	52.28	15.28	190.43
25	5.40	-5007	21438	-2334	52.28	13.73	173.40
26	5.63	-4482	21563	-2323	52.28	12.26	157.04
27	5.85	-3960	21681	-2301	52.28	10.92	141.80
28	6.08	-3442	21793	-2272	52.28	9.72	128.02
29	6.30	-2931	22056	-2117	52.28	8.71	116.24
30	6.53	-2454	22339	-1943	52.28	7.91	106.73
31	6.75	-2017	22622	-1757	52.28	7.23	98.70
32	6.98	-1622	22905	-1564	52.28	6.63	91.53
33	7.20	-1270	23187	-1367	52.28	6.09	85.23
34	7.42	-962	23470	-1170	52.28	5.63	79.82
35	7.65	-699	23753	-976	52.28	5.24	75.29
36	7.88	-480	24036	-785	52.28	4.93	71.63
37	8.10	-303	24318	-600	52.28	4.69	68.83
38	8.33	-168	24601	-420	52.28	4.51	66.86
39	8.55	-74	24884	-247	52.28	4.40	65.71
40	8.78	-18	25166	-80	52.28	4.36	65.33
41	9.00	0	25449	-80	52.28	4.38	65.70

Dichiarazioni secondo N.T.C. 2018 (punto 10.2)

Analisi e verifiche svolte con l'ausilio di codici di calcolo

Il sottoscritto Ing. Andrea BIANCO, in qualità di calcolatore delle opere in progetto, dichiara quanto segue.

Tipo di analisi svolta

L'analisi strutturale e le verifiche sono condotte con l'ausilio di un codice di calcolo automatico. La verifica della sicurezza degli elementi strutturali è stata valutata con i metodi della scienza delle costruzioni.

Il calcolo dei muri di sostegno viene eseguito secondo le seguenti fasi:

- Calcolo della spinta del terreno
- Verifica a ribaltamento
- Verifica a scorrimento del muro sul piano di posa
- Verifica della stabilità complesso fondazione terreno (carico limite)
- Verifica della stabilità globale
- Calcolo delle sollecitazioni sia del muro che della fondazione, progetto delle armature e relative verifiche dei materiali.
- Calcolo della portanza assiale e trasversale dei pali. Progetto e verifica delle armature dei pali inseriti.

L'analisi strutturale sotto le azioni sismiche è condotta con il metodo dell'analisi statica equivalente secondo le disposizioni del capitolo 7 del DM 17/01/2018.

La verifica delle sezioni degli elementi strutturali è eseguita con il metodo degli Stati Limite. Le combinazioni di carico adottate sono esaustive relativamente agli scenari di carico più gravosi cui l'opera sarà soggetta.

Origine e caratteristiche dei codici di calcolo

Titolo	MAX - Analisi e Calcolo Muri di Sostegno
Versione	14.00
Produttore	Aztec Informatica srl, Casole Bruzio (CS)
Utente	Ing. Bianco Andrea
Licenza	AIU4617A3

Affidabilità dei codici di calcolo

Un attento esame preliminare della documentazione a corredo del software ha consentito di valutarne l'affidabilità. La documentazione fornita dal produttore del software contiene un'esauriente descrizione delle basi teoriche, degli algoritmi impiegati e l'individuazione dei campi d'impiego. La società produttrice Aztec Informatica srl ha verificato l'affidabilità e la robustezza del codice di calcolo attraverso un numero significativo di casi prova in cui i risultati dell'analisi numerica sono stati confrontati con soluzioni teoriche.

Modalità di presentazione dei risultati

La relazione di calcolo strutturale presenta i dati di calcolo tale da garantirne la leggibilità, la corretta interpretazione e la riproducibilità. La relazione di calcolo illustra in modo esaustivo i dati in ingresso ed i risultati delle analisi in forma tabellare.

Informazioni generali sull'elaborazione

Il software prevede una serie di controlli automatici che consentono l'individuazione di errori di modellazione, di non rispetto di limitazioni geometriche e di armatura e di presenza di elementi non verificati. Il codice di calcolo consente di visualizzare e controllare, sia in forma grafica che tabellare, i dati del modello strutturale, in modo da avere una visione consapevole del comportamento corretto del modello strutturale.

Giudizio motivato di accettabilità dei risultati

I risultati delle elaborazioni sono stati sottoposti a controlli dal sottoscritto utente del software. Tale valutazione ha compreso il confronto con i risultati di semplici calcoli, eseguiti con metodi tradizionali. Inoltre sulla base di considerazioni riguardanti gli stati tensionali e deformativi determinati, si è valutata la validità delle scelte operate in sede di schematizzazione e di modellazione della struttura e delle azioni.

In base a quanto sopra, io sottoscritto asserisco che l'elaborazione è corretta ed idonea al caso specifico, pertanto i risultati di calcolo sono da ritenersi validi ed accettabili.