

PROVINCIA DI PESCARA

SETTORE I TECNICO
SERVIZIO EDILIZIA SCOLASTICA
Piazza Italia, 30_65121 Pescara



Liceo Scientifico "C.D'Ascanio " Via Polacchi _ Montesilvano (Pe)

OGGETTO:
**PROGETTO ESECUTIVO CALCOLO STRUTTURALE
PALESTRA POLIVALENTE - CORPO SPOGLIATOI**

RELAZIONE GEOTECNICA E SULLE FONDAZIONI

Tav. n° 12

Redatto da
Dott. Arch. Stefano Vagnoni

Il Responsabile del Procedimento
Dott. Arch. Alessandra Berardi

Data: giugno 2019

RELAZIONE GEOTECNICA

Tenendo conto dei valori e considerazioni riportate nella relazione geologica redatta dal Dott. Geol. Domenico Bartolucci, sullo studio geologico e geotecnico inerente all'area di intervento, sita in località MONTESILVANO (PE), Si è ritenuto opportuno adottare come tipologia di fondazione quella su plinti collegati la cui base venga approfondita fino a raggiungimento del litotipo B costituito da limi-argillosi sabbiosi mediamente addensati, pertanto gli strati superficiali dovranno preventivamente essere asportati. Sotto i plinti è prevista la realizzazione di una base in cls magro di dimensioni come da esecutivi allegati.

Di seguito si riporta il calcolo della capacità portante del terreno applicando la COMBINAZIONE: (A1+M1+R3).

Nella analisi sismica, il territorio è stato considerato, ricadente in zona 3 con suolo appartenente alla categoria C su superficie classificata come categoria T1.

DATI GENERALI			
COEFFICIENTI PARZIALI GEOTECNICA			
	TABELLA M1		TABELLA M2
Tangente Resist. Taglio	1,00		1,25
Peso Specifico	1,00		1,00
Coesione Efficace (c'k)	1,00		1,25
Resist. a taglio NON drenata (cuk)	1,00		1,40
Tipo Approccio	Combinazione.: (A1+M1+R3)		
Tipo di fondazione	Superficiale		
	COEFFICIENTE R1	COEFFICIENTE R2	COEFFICIENTE R3
Capacita' Portante	1,00	1,80	2,30
Scorrimento	1,00	1,10	1,10

Di seguito si riporta il CALCOLO DELLA CAPACITÀ PORTANTE combinazione (A1+M1+R3) effettuando le seguenti verifiche:

- **Verifiche in condizione non drenate**

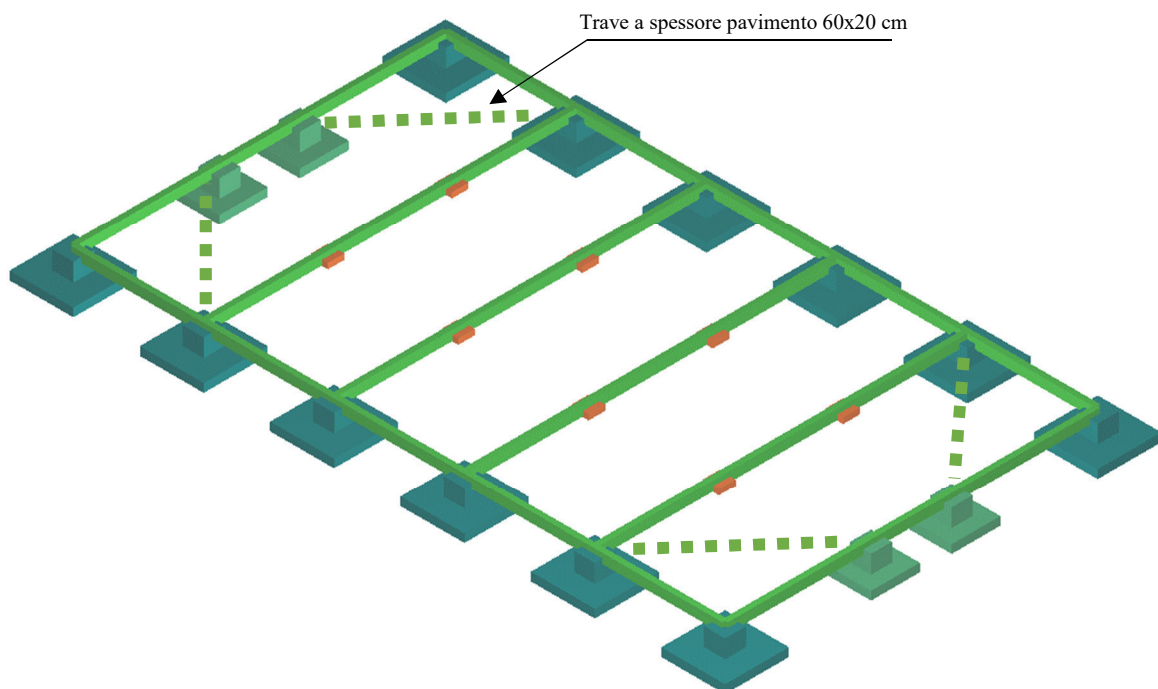
- 1) Verifiche combinazioni statiche
- 2) Verifica combinazioni dinamiche

- **Verifiche in condizione drenate**

- 1) Verifiche combinazioni statiche
- 2) Verifica combinazioni dinamiche

Con relative verifiche collasso per scorrimento

Schema fondazioni



Verifiche combinazioni di carico statiche

Verifica in condizioni **non drenate**

Dati terreno

Terreno	limi-argilloso sabbiosi mediamente addensati
Angolo d'attrito φ	22.70 [°]
Coesione c	0.0 [kg/cm ²]
Coesione non drenata c_u	0.37 [kg/cm ²]
Carico addizionale di superficie q	3900.0 [kg/m ²]
Profondità D	2.20 [m]
Peso proprio terreno γ	1780.0 [kg/m ³]

Fattori parziale di sicurezza del terreno verifiche a scorrimento

$\gamma_{R,Scor}$	1.000
k_1 fattore riduzione di φ	1.000
k_2 fattore riduzione di c	1.000
k_3 fattore riduzione di c_u	1.000

Fattori parziale di sicurezza del terreno

γ_{tgw}	1.000
γ_c	1.000
γ_{cu}	1.000

Fattori parziale di sicurezza

Verifica di capacità portante	2.300
Verifica a scorrimento	1.100

Fattori di correzione dinamici per combinazioni statiche

z_z	1.000
z_q	1.000
z_g	1.000

Verifiche

Legenda	
B_{eq}	Base del plinto equivalente
H_{eq}	Altezza del plinto equivalente
$H_{Trasporto}$	Quota azioni esterne rispetto alla sezione di verifica
Comb.	Combinazione di carico
N	Azione verticale
M_x	Momento flettente M_x
M_y	Momento flettente M_y
Q_{Ed}	Carico verticale di progetto
$Q_{Rd,T}$	Capacità portante Terzaghi
$Q_{Rd,M}$	Capacità portante Mejerhoff
$Q_{Rd,EC7}$	Capacità portante EuroCodice 7
$Q_{Rd,V}$	Capacità portante Vesic
$Q_{Rd,T,PP}$	Capacità portante Terzaghi con correzione Paolucci-Pecker
$Q_{Rd,M,PP}$	Capacità portante Mejerhoff con correzione Paolucci-Pecker
$Q_{Rd,EC7,PP}$	Capacità portante EuroCodice 7 con correzione Paolucci-Pecker
$Q_{Rd,V,PP}$	Capacità portante Vesic con correzione Paolucci-Pecker

$Q_{Rd,T,MN,C}$	Capacità portante Terzaghi con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,M,MN,C}$	Capacità portante Mejerhoff con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,EC7,MN,C}$	Capacità portante EuroCodice 7 con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,V,MN,C}$	Capacità portante Vesic con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,T,MN,C}$	Capacità portante Terzaghi con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,M,MN,C}$	Capacità portante Mejerhoff con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,EC7,MN,C}$	Capacità portante EuroCodice 7 con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,V,MN,C}$	Capacità portante Vesic con correzione Maugeri-Novità con effetto cinematico
F_x	Azione di scorrimento F_x
F_y	Azione di scorrimento F_y
$H_{Ed,d} = \sqrt{F_x^2 + F_y^2}$	Azione di scorrimento totale $H_{Ed} = \sqrt{F_x^2 + F_y^2}$
H_{Rd}	Resistenza allo scorrimento

Elemento	B_{Eq} [m]	H_{Eq} [m]	$H_{Trasporto}$ [m]	Comb.	N [kg]	M_x [kgm]	M_y [kgm]	Q_{Ed} [kg]	(S/R) _r	F_x [kg]	F_y [kg]	H_{Ed} [kg]	(S/R) _{Scor}
1	4.60	4.60	1.90	1	175747.3	3258.1	-11068.1	175747.3	0.609	-1397.5	1672.7	2179.6	0.032
				2	175709.2	11457.8	-3265.3	175709.2	0.609	1640.6	-1337.5	2116.8	0.030
				3	176408.0	3238.7	4522.5	176408.0	0.611	4679.0	1672.4	4968.9	0.073
				4	176446.1	-4961.0	-3280.3	176446.1	0.611	1640.9	4682.6	4961.8	0.070
				5	180607.0	3110.5	-8127.2	180607.0	0.626	-178.9	1670.0	1679.6	0.024
				6	180584.1	8030.3	-3445.5	180584.1	0.626	1644.0	-136.1	1649.6	0.024
				7	181003.4	3098.9	1227.2	181003.4	0.627	3467.0	1669.8	3848.2	0.056
				8	181026.2	-1820.9	-3454.5	181026.2	0.627	1644.1	3476.0	3845.2	0.055
				9	179661.4	3139.3	-8091.7	179661.4	0.622	-179.5	1670.6	1680.2	0.024
				10	179638.6	8059.1	-3410.0	179638.6	0.622	1643.3	-135.6	1648.9	0.024
				11	180057.9	3127.6	1262.7	180057.9	0.624	3466.4	1670.3	3847.8	0.056
				12	180080.7	-1792.2	-3419.0	180080.7	0.624	1643.5	3476.5	3845.4	0.055
2	4.60	4.60	1.90	1	218473.8	-4044.2	-4150.4	218473.8	0.757	-565.2	3093.5	3144.7	0.045
				2	217768.1	23002.5	-1342.0	217768.1	0.754	22.3	-4429.0	4429.0	0.064
				3	218190.7	-4036.6	1452.4	218190.7	0.756	610.0	3093.6	3153.2	0.045
				4	218896.4	-31083.3	-1356.0	218896.4	0.758	22.5	10616.0	10616.0	0.153
				5	227741.4	-4309.6	-3186.9	227741.4	0.789	-327.3	3088.6	3105.9	0.044
				6	227318.0	11918.4	-1501.8	227318.0	0.787	25.2	-1424.9	1425.1	0.020
				7	227571.5	-4305.0	174.8	227571.5	0.788	377.9	3088.7	3111.7	0.044
				8	227994.9	-20533.0	-1510.2	227994.9	0.790	25.4	7602.1	7602.2	0.108
				9	225876.6	-4256.2	-3155.5	225876.6	0.782	-327.9	3089.6	3106.9	0.044
				10	225453.1	11971.8	-1470.4	225453.1	0.781	24.6	-1423.9	1424.1	0.020
				11	225706.7	-4251.6	206.2	225706.7	0.782	377.3	3089.7	3112.6	0.044
				12	226130.1	-20479.6	-1478.8	226130.1	0.783	24.8	7603.1	7603.2	0.108
3	4.60	4.60	1.90	1	218755.8	-4180.0	-3028.7	218755.8	0.758	-583.7	3104.7	3159.1	0.045
				2	218186.4	23378.0	70.3	218186.4	0.756	-2.1	-4417.8	4417.8	0.064
				3	218770.8	-4180.3	3169.2	218770.8	0.758	579.6	3104.7	3158.3	0.045
				4	219340.3	-31738.2	70.3	219340.3	0.760	-2.1	10627.2	10627.2	0.153
				5	228135.4	-4450.1	-1780.5	228135.4	0.790	-351.2	3099.8	3119.6	0.044
				6	227793.8	12084.7	78.9	227793.8	0.789	-2.2	-1413.7	1413.7	0.020
				7	228144.4	-4450.3	1938.3	228144.4	0.790	346.8	3099.8	3119.1	0.044
				8	228486.1	-20985.1	78.9	228486.1	0.792	-2.2	7613.3	7613.3	0.108
				9	226260.1	-4396.1	-1782.2	226260.1	0.784	-351.2	3100.7	3120.6	0.044
				10	225918.5	12138.7	77.2	225918.5	0.783	-2.2	-1412.8	1412.8	0.020
				11	226269.1	-4396.3	1936.5	226269.1	0.784	346.8	3100.7	3120.1	0.044
				12	226610.8	-20931.0	77.2	226610.8	0.785	-2.2	7614.2	7614.2	0.108
4	4.60	4.60	1.90	1	218770.8	-4180.3	-3169.2	218770.8	0.758	-579.6	3104.7	3158.3	0.045
				2	218186.4	23378.0	-70.3	218186.4	0.756	2.1	-4417.8	4417.8	0.064
				3	218755.8	-4180.0	3028.7	218755.8	0.758	583.7	3104.7	3159.1	0.045
				4	219340.3	-31738.2	-70.3	219340.3	0.760	2.1	10627.2	10627.2	0.153
				5	228144.4	-4450.3	-1938.3	228144.4	0.790	-346.8	3099.8	3119.1	0.044
				6	227793.8	12084.7	-78.9	227793.8	0.789	2.2	-1413.7	1413.7	0.020
				7	228135.5	-4450.1	1780.5	228135.5	0.790	351.2	3099.8	3119.6	0.044
				8	228486.1	-20985.1	-78.9	228486.1	0.792	2.2	7613.3	7613.3	0.108

				9	226269.1	-4396.3	-1936.5	226269.1	0.784	-346.8	3100.7	3120.1	0.044
				10	225918.5	12138.7	-77.2	225918.5	0.783	2.2	-1412.8	1412.8	0.020
				11	226260.1	-4396.1	1782.2	226260.1	0.784	351.2	3100.7	3120.6	0.044
				12	226610.8	-20931.0	-77.2	226610.8	0.785	2.2	7614.2	7614.2	0.108
5	4.60	4.60	1.90	1	218190.7	-4036.6	-1452.4	218190.7	0.756	-610.0	3093.6	3153.2	0.045
				2	217768.1	23002.5	1342.0	217768.1	0.754	-22.3	-4429.0	4429.0	0.064
				3	218473.8	-4044.2	4150.4	218473.8	0.757	565.2	3093.5	3144.7	0.045
				4	218896.4	-31083.3	1356.0	218896.4	0.758	-22.5	10616.0	10616.0	0.153
				5	227571.5	-4305.0	-174.8	227571.5	0.788	-377.9	3088.7	3111.7	0.044
				6	227318.0	11918.4	1501.8	227318.0	0.787	-25.2	-1424.9	1425.1	0.020
				7	227741.4	-4309.6	3186.9	227741.4	0.789	327.3	3088.6	3105.9	0.044
				8	227994.9	-20533.0	1510.2	227994.9	0.790	-25.4	7602.1	7602.2	0.108
				9	225706.7	-4251.6	-206.2	225706.7	0.782	-377.3	3089.7	3112.6	0.044
				10	225453.1	11971.8	1470.4	225453.1	0.781	-24.6	-1423.9	1424.1	0.020
				11	225876.6	-4256.2	3155.5	225876.6	0.782	327.9	3089.6	3106.9	0.044
				12	226130.1	-20479.6	1478.8	226130.1	0.783	-24.8	7603.1	7603.2	0.108
6	4.60	4.60	1.90	1	176408.0	3238.7	-4522.5	176408.0	0.611	-4679.0	1672.4	4968.9	0.073
				2	175709.2	11457.8	3265.3	175709.2	0.609	-1640.6	-1337.5	2116.8	0.030
				3	175747.2	3258.1	11068.1	175747.2	0.609	1397.5	1672.7	2179.6	0.032
				4	176446.0	-4961.0	3280.3	176446.0	0.611	-1640.9	4682.6	4961.8	0.070
				5	181003.4	3098.9	-1227.2	181003.4	0.627	-3467.0	1669.8	3848.2	0.056
				6	180584.1	8030.3	3445.5	180584.1	0.626	-1644.0	-136.1	1649.6	0.024
				7	180606.9	3110.5	8127.2	180606.9	0.626	178.9	1670.0	1679.6	0.024
				8	181026.2	-1820.9	3454.5	181026.2	0.627	-1644.1	3476.0	3845.2	0.055
				9	180057.9	3127.6	-1262.7	180057.9	0.624	-3466.4	1670.3	3847.8	0.056
				10	179638.6	8059.1	3410.0	179638.6	0.622	-1643.3	-135.6	1648.9	0.024
				11	179661.4	3139.3	8091.7	179661.4	0.622	179.5	1670.6	1680.2	0.024
				12	180080.7	-1792.2	3419.0	180080.7	0.624	-1643.5	3476.5	3845.4	0.055
7	3.50	3.50	1.90	1	101824.7	-2446.5	-26383.4	101824.7	0.609	-6566.2	-134.3	6567.6	0.207
				2	101309.4	-453.1	-141.2	101309.4	0.606	0.0	-885.8	885.8	0.022
				3	101828.9	-2457.7	26100.9	101828.9	0.609	6566.3	-134.9	6567.6	0.207
				4	102344.1	-4451.1	-141.3	102344.1	0.612	0.0	616.6	616.6	0.015
				5	101855.9	-2528.2	-15889.1	101855.9	0.609	-3939.7	-138.8	3942.2	0.112
				6	101546.8	-1332.2	-143.8	101546.8	0.608	0.0	-589.7	589.7	0.015
				7	101858.5	-2534.9	15601.5	101858.5	0.610	3939.8	-139.1	3942.2	0.112
				8	102167.6	-3731.0	-143.9	102167.6	0.611	0.0	311.8	311.8	0.008
				9	101849.8	-2512.3	-15888.6	101849.8	0.609	-3939.7	-137.9	3942.2	0.112
				10	101540.7	-1316.3	-143.3	101540.7	0.608	0.0	-588.8	588.8	0.015
				11	101852.4	-2519.0	15602.0	101852.4	0.609	3939.8	-138.3	3942.2	0.112
				12	102161.5	-3715.1	-143.4	102161.5	0.611	0.0	312.6	312.6	0.008
8	3.50	3.50	1.90	1	101828.9	-2457.7	-26100.9	101828.9	0.609	-6566.3	-134.9	6567.6	0.207
				2	101309.4	-453.1	141.2	101309.4	0.606	-0.0	-885.8	885.8	0.022
				3	101824.7	-2446.5	26383.4	101824.7	0.609	6566.3	-134.3	6567.6	0.207
				4	102344.1	-4451.1	141.3	102344.1	0.612	-0.0	616.6	616.6	0.015
				5	101858.5	-2534.9	-15601.5	101858.5	0.610	-3939.8	-139.1	3942.2	0.112
				6	101546.8	-1332.2	143.8	101546.8	0.608	-0.0	-589.7	589.7	0.015
				7	101855.9	-2528.2	15889.2	101855.9	0.609	3939.8	-138.8	3942.2	0.112
				8	102167.6	-3731.0	143.9	102167.6	0.611	-0.0	311.8	311.8	0.008
				9	101852.4	-2519.0	-15602.0	101852.4	0.609	-3939.8	-138.3	3942.2	0.112
				10	101540.7	-1316.3	143.3	101540.7	0.608	-0.0	-588.8	588.8	0.015
				11	101849.8	-2512.3	15888.6	101849.8	0.609	3939.8	-137.9	3942.2	0.112
				12	102161.5	-3715.1	143.4	102161.5	0.611	-0.0	312.6	312.6	0.008
9	3.50	3.50	1.90	1	101824.7	2446.6	-26383.6	101824.7	0.609	-6566.2	134.3	6567.6	0.207
				2	102344.2	4451.2	-141.5	102344.2	0.612	0.0	-616.6	616.6	0.015
				3	101829.0	2457.7	26100.8	101829.0	0.609	6566.3	134.9	6567.6	0.207
				4	101309.5	453.1	-141.3	101309.5	0.606	0.0	885.8	885.8	0.022
				5	101855.9	2528.3	-15889.3	101855.9	0.609	-3939.7	138.8	3942.2	0.112
				6	102167.6	3731.1	-144.1	102167.6	0.611	0.0	-311.8	311.8	0.008
				7	101858.5	2535.0	15601.3	101858.5	0.610	3939.8	139.1	3942.2	0.112
				8	101546.8	1332.2	-143.9	101546.8	0.608	0.0	589.7	589.7	0.015

				9	101849.8	2512.4	-15888.8	101849.8	0.609	-3939.7	137.9	3942.2	0.112
				10	102161.5	3715.2	-143.5	102161.5	0.611	0.0	-312.6	312.6	0.008
				11	101852.4	2519.1	15601.8	101852.4	0.609	3939.8	138.3	3942.2	0.112
				12	101540.7	1316.3	-143.4	101540.7	0.608	0.0	588.8	588.8	0.015
10	3.50	3.50	1.90	1	101829.0	2457.7	-26100.8	101829.0	0.609	-6566.3	134.9	6567.6	0.207
				2	102344.2	4451.2	141.5	102344.2	0.612	-0.0	-616.6	616.6	0.015
				3	101824.7	2446.6	26383.6	101824.7	0.609	6566.3	134.3	6567.6	0.207
				4	101309.5	453.1	141.3	101309.5	0.606	-0.0	885.8	885.8	0.022
				5	101858.5	2535.0	-15601.3	101858.5	0.610	-3939.8	139.1	3942.2	0.112
				6	102167.6	3731.1	144.1	102167.6	0.611	-0.0	-311.8	311.8	0.008
				7	101855.9	2528.3	15889.3	101855.9	0.609	3939.8	138.8	3942.2	0.112
				8	101546.8	1332.2	143.9	101546.8	0.608	-0.0	589.7	589.7	0.015
				9	101852.4	2519.1	-15601.8	101852.4	0.609	-3939.8	138.3	3942.2	0.112
				10	102161.5	3715.2	143.5	102161.5	0.611	-0.0	-312.6	312.6	0.008
				11	101849.8	2512.4	15888.8	101849.8	0.609	3939.8	137.9	3942.2	0.112
				12	101540.7	1316.3	143.4	101540.7	0.608	-0.0	588.8	588.8	0.015
11	4.60	4.60	1.90	1	175750.3	-3257.8	-11080.7	175750.3	0.609	-1397.2	-1672.7	2179.5	0.032
				2	176449.1	4961.3	-3292.9	176449.1	0.611	1641.2	-4682.6	4961.9	0.070
				3	176411.0	-3238.4	4509.9	176411.0	0.611	4679.3	-1672.4	4969.1	0.073
				4	175712.2	-11457.5	-3277.9	175712.2	0.609	1640.9	1337.5	2116.9	0.030
				5	180610.0	-3110.3	-8139.8	180610.0	0.626	-178.7	-1670.0	1679.6	0.024
				6	181029.3	1821.2	-3467.1	181029.3	0.627	1644.4	-3476.0	3845.3	0.055
				7	181006.4	-3098.6	1214.6	181006.4	0.627	3467.2	-1669.8	3848.4	0.056
				8	180587.1	-8030.1	-3458.1	180587.1	0.626	1644.2	136.1	1649.8	0.024
				9	179664.4	-3139.0	-8104.3	179664.4	0.622	-179.3	-1670.6	1680.1	0.024
				10	180083.7	1792.5	-3431.6	180083.7	0.624	1643.7	-3476.5	3845.5	0.055
				11	180060.9	-3127.3	1250.1	180060.9	0.624	3466.6	-1670.3	3848.0	0.056
				12	179641.6	-8058.8	-3422.6	179641.6	0.622	1643.6	135.6	1649.1	0.024
12	4.60	4.60	1.90	1	218825.1	4055.5	-4173.8	218825.1	0.758	-564.8	-3093.5	3144.6	0.045
				2	219247.7	31094.5	-1379.4	219247.7	0.760	23.0	-10616.0	10616.0	0.153
				3	218541.9	4047.8	1429.0	218541.9	0.757	610.5	-3093.6	3153.3	0.045
				4	218119.4	-22991.2	-1365.4	218119.4	0.756	22.7	4429.0	4429.0	0.064
				5	228092.7	4320.8	-3210.3	228092.7	0.790	-326.9	-3088.6	3105.9	0.044
				6	228346.2	20544.3	-1533.6	228346.2	0.791	25.8	-7602.1	7602.2	0.108
				7	227922.8	4316.2	151.4	227922.8	0.790	378.3	-3088.7	3111.8	0.044
				8	227669.2	-11907.2	-1525.2	227669.2	0.789	25.6	1424.9	1425.1	0.020
				9	226227.8	4267.5	-3178.9	226227.8	0.784	-327.4	-3089.6	3106.9	0.044
				10	226481.3	20490.9	-1502.2	226481.3	0.785	25.2	-7603.1	7603.2	0.108
				11	226057.9	4262.9	182.8	226057.9	0.783	377.7	-3089.7	3112.7	0.044
				12	225804.4	-11960.6	-1493.8	225804.4	0.782	25.1	1423.9	1424.1	0.020
13	4.60	4.60	1.90	1	219455.3	4202.2	-3040.4	219455.3	0.760	-583.5	-3104.7	3159.0	0.045
				2	220039.7	31760.4	58.5	220039.7	0.762	-1.8	-10627.2	10627.2	0.153
				3	219470.2	4202.5	3157.5	219470.2	0.760	579.8	-3104.7	3158.3	0.045
				4	218885.8	-23355.8	58.6	218885.8	0.758	-1.8	4417.8	4417.8	0.064
				5	228834.9	4472.3	-1792.2	228834.9	0.793	-351.0	-3099.8	3119.6	0.044
				6	229185.5	21007.3	67.1	229185.5	0.794	-2.0	-7613.3	7613.3	0.108
				7	228843.8	4472.5	1926.5	228843.8	0.793	347.0	-3099.8	3119.1	0.044
				8	228493.2	-12062.5	67.2	228493.2	0.792	-2.0	1413.7	1413.7	0.020
				9	226959.5	4418.3	-1793.9	226959.5	0.786	-351.0	-3100.7	3120.5	0.044
				10	227310.2	20953.3	65.4	227310.2	0.787	-2.0	-7614.2	7614.2	0.108
				11	226968.5	4418.5	1924.8	226968.5	0.786	347.0	-3100.7	3120.1	0.044
				12	226617.9	-12116.5	65.4	226617.9	0.785	-2.0	1412.8	1412.8	0.020
14	4.60	4.60	1.90	1	219470.3	4202.5	-3157.5	219470.3	0.760	-579.8	-3104.7	3158.3	0.045
				2	220039.7	31760.4	-58.5	220039.7	0.762	1.8	-10627.2	10627.2	0.153
				3	219455.3	4202.2	3040.4	219455.3	0.760	583.5	-3104.7	3159.0	0.045
				4	218885.8	-23355.8	-58.6	218885.8	0.758	1.8	4417.8	4417.8	0.064
				5	228843.8	4472.5	-1926.5	228843.8	0.793	-347.0	-3099.8	3119.1	0.044
				6	229185.5	21007.3	-67.1	229185.5	0.794	2.0	-7613.3	7613.3	0.108
				7	228834.9	4472.3	1792.2	228834.9	0.793	351.0	-3099.8	3119.6	0.044
				8	228493.2	-12062.5	-67.2	228493.2	0.792	2.0	1413.7	1413.7	0.020

				9	226968.5	4418.5	-1924.8	226968.5	0.786	-347.0	-3100.7	3120.1	0.044
				10	227310.2	20953.3	-65.4	227310.2	0.787	2.0	-7614.2	7614.2	0.108
				11	226959.6	4418.3	1793.9	226959.6	0.786	351.0	-3100.7	3120.5	0.044
				12	226617.9	-12116.5	-65.4	226617.9	0.785	2.0	1412.8	1412.8	0.020
15	4.60	4.60	1.90	1	218541.9	4047.8	-1429.0	218541.9	0.757	-610.5	-3093.6	3153.3	0.045
				2	219247.6	31094.5	1379.4	219247.6	0.760	-23.0	-10616.0	10616.0	0.153
				3	218825.1	4055.5	4173.8	218825.1	0.758	564.8	-3093.5	3144.6	0.045
				4	218119.4	-22991.2	1365.4	218119.4	0.756	-22.7	4429.0	4429.0	0.064
				5	227922.8	4316.2	-151.4	227922.8	0.790	-378.3	-3088.7	3111.8	0.044
				6	228346.2	20544.3	1533.6	228346.2	0.791	-25.8	-7602.1	7602.2	0.108
				7	228092.7	4320.8	3210.3	228092.7	0.790	326.9	-3088.6	3105.9	0.044
				8	227669.2	-11907.2	1525.2	227669.2	0.789	-25.6	1424.9	1425.1	0.020
				9	226057.9	4262.9	-182.8	226057.9	0.783	-377.7	-3089.7	3112.7	0.044
				10	226481.3	20490.9	1502.2	226481.3	0.785	-25.2	-7603.1	7603.2	0.108
				11	226227.8	4267.4	3178.9	226227.8	0.784	327.4	-3089.6	3106.9	0.044
				12	225804.4	-11960.6	1493.8	225804.4	0.782	-25.1	1423.9	1424.1	0.020
16	4.60	4.60	1.90	1	176411.0	-3238.4	-4509.9	176411.0	0.611	-4679.3	-1672.4	4969.1	0.073
				2	176449.1	4961.3	3292.9	176449.1	0.611	-1641.2	-4682.6	4961.9	0.070
				3	175750.3	-3257.9	11080.7	175750.3	0.609	1397.2	-1672.7	2179.5	0.032
				4	175712.2	-11457.5	3277.9	175712.2	0.609	-1640.9	1337.5	2116.9	0.030
				5	181006.4	-3098.6	-1214.6	181006.4	0.627	-3467.2	-1669.8	3848.4	0.056
				6	181029.2	1821.2	3467.1	181029.2	0.627	-1644.4	-3476.0	3845.3	0.055
				7	180610.0	-3110.3	8139.8	180610.0	0.626	178.7	-1670.0	1679.6	0.024
				8	180587.1	-8030.1	3458.1	180587.1	0.626	-1644.2	136.1	1649.8	0.024
				9	180060.9	-3127.3	-1250.1	180060.9	0.624	-3466.6	-1670.3	3848.0	0.056
				10	180083.7	1792.5	3431.6	180083.7	0.624	-1643.7	-3476.5	3845.5	0.055
				11	179664.4	-3139.0	8104.3	179664.4	0.622	179.3	-1670.5	1680.1	0.024
				12	179641.6	-8058.8	3422.6	179641.6	0.622	-1643.6	135.6	1649.1	0.024
17	1.20	1.20	0.40	1	10372.5	-53.0	-15.6	10372.5	0.528	0.0	0.0	0.0	0.000
				2	11098.0	-83.0	-5.1	11098.0	0.565	0.0	0.0	0.0	0.000
				3	10370.9	-52.8	5.4	10370.9	0.528	0.0	0.0	0.0	0.000
				4	9645.5	-22.8	-5.1	9645.5	0.491	0.0	0.0	0.0	0.000
				5	10426.3	-60.2	-12.0	10426.3	0.531	0.0	0.0	0.0	0.000
				6	10861.6	-78.1	-5.7	10861.6	0.553	0.0	0.0	0.0	0.000
				7	10425.3	-60.0	0.6	10425.3	0.531	0.0	0.0	0.0	0.000
				8	9990.1	-42.1	-5.7	9990.1	0.509	0.0	0.0	0.0	0.000
				9	10415.5	-58.7	-11.8	10415.5	0.530	0.0	0.0	0.0	0.000
				10	10850.8	-76.7	-5.5	10850.8	0.552	0.0	0.0	0.0	0.000
				11	10414.5	-58.6	0.7	10414.5	0.530	0.0	0.0	0.0	0.000
				12	9979.3	-40.6	-5.6	9979.3	0.508	0.0	0.0	0.0	0.000
18	1.20	1.20	0.40	1	10370.6	-53.1	-11.3	10370.6	0.528	0.0	0.0	0.0	0.000
				2	11110.7	-83.7	0.2	11110.7	0.566	0.0	0.0	0.0	0.000
				3	10370.6	-53.1	11.8	10370.6	0.528	0.0	0.0	0.0	0.000
				4	9630.5	-22.4	0.2	9630.5	0.490	0.0	0.0	0.0	0.000
				5	10425.0	-60.3	-6.7	10425.0	0.531	0.0	0.0	0.0	0.000
				6	10869.0	-78.7	0.3	10869.0	0.553	0.0	0.0	0.0	0.000
				7	10425.0	-60.4	7.2	10425.0	0.531	0.0	0.0	0.0	0.000
				8	9980.9	-42.0	0.3	9980.9	0.508	0.0	0.0	0.0	0.000
				9	10414.1	-58.9	-6.7	10414.1	0.530	0.0	0.0	0.0	0.000
				10	10858.2	-77.3	0.3	10858.2	0.553	0.0	0.0	0.0	0.000
				11	10414.1	-58.9	7.2	10414.1	0.530	0.0	0.0	0.0	0.000
				12	9970.1	-40.5	0.3	9970.1	0.508	0.0	0.0	0.0	0.000
19	1.20	1.20	0.40	1	10370.6	-53.1	-11.8	10370.6	0.528	0.0	0.0	0.0	0.000
				2	11110.7	-83.7	-0.2	11110.7	0.566	0.0	0.0	0.0	0.000
				3	10370.6	-53.1	11.3	10370.6	0.528	0.0	0.0	0.0	0.000
				4	9630.5	-22.4	-0.2	9630.5	0.490	0.0	0.0	0.0	0.000
				5	10425.0	-60.4	-7.2	10425.0	0.531	0.0	0.0	0.0	0.000
				6	10869.0	-78.7	-0.3	10869.0	0.553	0.0	0.0	0.0	0.000
				7	10425.0	-60.3	6.7	10425.0	0.531	0.0	0.0	0.0	0.000
				8	9980.9	-42.0	-0.3	9980.9	0.508	0.0	0.0	0.0	0.000

				9	10414.1	-58.9	-7.2	10414.1	0.530	0.0	0.0	0.0	0.000
				10	10858.2	-77.3	-0.3	10858.2	0.553	0.0	0.0	0.0	0.000
				11	10414.1	-58.9	6.7	10414.1	0.530	0.0	0.0	0.0	0.000
				12	9970.1	-40.5	-0.3	9970.1	0.508	0.0	0.0	0.0	0.000
20	1.20	1.20	0.40	1	10370.9	-52.8	-5.4	10370.9	0.528	0.0	0.0	0.0	0.000
				2	11098.0	-83.0	5.1	11098.0	0.565	0.0	0.0	0.0	0.000
				3	10372.5	-53.0	15.6	10372.5	0.528	0.0	0.0	0.0	0.000
				4	9645.5	-22.8	5.1	9645.5	0.491	0.0	0.0	0.0	0.000
				5	10425.3	-60.0	-0.6	10425.3	0.531	0.0	0.0	0.0	0.000
				6	10861.6	-78.1	5.7	10861.6	0.553	0.0	0.0	0.0	0.000
				7	10426.3	-60.2	12.0	10426.3	0.531	0.0	0.0	0.0	0.000
				8	9990.1	-42.1	5.7	9990.1	0.509	0.0	0.0	0.0	0.000
				9	10414.5	-58.6	-0.7	10414.5	0.530	0.0	0.0	0.0	0.000
				10	10850.8	-76.7	5.5	10850.8	0.552	0.0	0.0	0.0	0.000
				11	10415.5	-58.7	11.8	10415.5	0.530	0.0	0.0	0.0	0.000
				12	9979.3	-40.6	5.6	9979.3	0.508	0.0	0.0	0.0	0.000
21	1.20	1.20	0.40	1	10376.3	53.2	-15.6	10376.3	0.528	0.0	0.0	0.0	0.000
				2	9649.2	23.0	-5.1	9649.2	0.491	0.0	0.0	0.0	0.000
				3	10374.7	53.0	5.4	10374.7	0.528	0.0	0.0	0.0	0.000
				4	11101.7	83.2	-5.1	11101.7	0.565	0.0	0.0	0.0	0.000
				5	10430.1	60.4	-12.0	10430.1	0.531	0.0	0.0	0.0	0.000
				6	9993.8	42.3	-5.7	9993.8	0.509	0.0	0.0	0.0	0.000
				7	10429.1	60.2	0.6	10429.1	0.531	0.0	0.0	0.0	0.000
				8	10865.4	78.4	-5.7	10865.4	0.553	0.0	0.0	0.0	0.000
				9	10419.3	58.9	-11.9	10419.3	0.530	0.0	0.0	0.0	0.000
				10	9983.0	40.8	-5.6	9983.0	0.508	0.0	0.0	0.0	0.000
				11	10418.3	58.8	0.7	10418.3	0.530	0.0	0.0	0.0	0.000
				12	10854.5	76.9	-5.6	10854.5	0.553	0.0	0.0	0.0	0.000
22	1.20	1.20	0.40	1	10378.1	53.5	-11.4	10378.1	0.528	0.0	0.0	0.0	0.000
				2	9638.0	22.9	0.2	9638.0	0.491	0.0	0.0	0.0	0.000
				3	10378.2	53.5	11.8	10378.2	0.528	0.0	0.0	0.0	0.000
				4	11118.2	84.2	0.2	11118.2	0.566	0.0	0.0	0.0	0.000
				5	10432.5	60.8	-6.7	10432.5	0.531	0.0	0.0	0.0	0.000
				6	9988.5	42.4	0.3	9988.5	0.508	0.0	0.0	0.0	0.000
				7	10432.5	60.8	7.2	10432.5	0.531	0.0	0.0	0.0	0.000
				8	10876.5	79.2	0.3	10876.5	0.554	0.0	0.0	0.0	0.000
				9	10421.6	59.3	-6.7	10421.6	0.531	0.0	0.0	0.0	0.000
				10	9977.6	40.9	0.3	9977.6	0.508	0.0	0.0	0.0	0.000
				11	10421.6	59.3	7.2	10421.6	0.531	0.0	0.0	0.0	0.000
				12	10865.7	77.7	0.3	10865.7	0.553	0.0	0.0	0.0	0.000
23	1.20	1.20	0.40	1	10378.2	53.5	-11.8	10378.2	0.528	0.0	0.0	0.0	0.000
				2	9638.0	22.9	-0.2	9638.0	0.491	0.0	0.0	0.0	0.000
				3	10378.1	53.5	11.4	10378.1	0.528	0.0	0.0	0.0	0.000
				4	11118.2	84.2	-0.2	11118.2	0.566	0.0	0.0	0.0	0.000
				5	10432.5	60.8	-7.2	10432.5	0.531	0.0	0.0	0.0	0.000
				6	9988.5	42.4	-0.3	9988.5	0.508	0.0	0.0	0.0	0.000
				7	10432.5	60.8	6.7	10432.5	0.531	0.0	0.0	0.0	0.000
				8	10876.5	79.2	-0.3	10876.5	0.554	0.0	0.0	0.0	0.000
				9	10421.6	59.3	-7.2	10421.6	0.531	0.0	0.0	0.0	0.000
				10	9977.6	40.9	-0.3	9977.6	0.508	0.0	0.0	0.0	0.000
				11	10421.6	59.3	6.7	10421.6	0.531	0.0	0.0	0.0	0.000
				12	10865.7	77.7	-0.3	10865.7	0.553	0.0	0.0	0.0	0.000
24	1.20	1.20	0.40	1	10374.7	53.0	-5.4	10374.7	0.528	0.0	0.0	0.0	0.000
				2	9649.2	23.0	5.1	9649.2	0.491	0.0	0.0	0.0	0.000
				3	10376.3	53.2	15.6	10376.3	0.528	0.0	0.0	0.0	0.000
				4	11101.7	83.2	5.1	11101.7	0.565	0.0	0.0	0.0	0.000
				5	10429.1	60.2	-0.6	10429.1	0.531	0.0	0.0	0.0	0.000
				6	9993.8	42.3	5.7	9993.8	0.509	0.0	0.0	0.0	0.000
				7	10430.1	60.4	12.0	10430.1	0.531	0.0	0.0	0.0	0.000
				8	10865.4	78.4	5.7	10865.4	0.553	0.0	0.0	0.0	0.000

				9	10418.3	58.8	-0.7	10418.3	0.530	0.0	0.0	0.0	0.000
				10	9983.0	40.8	5.6	9983.0	0.508	0.0	0.0	0.0	0.000
				11	10419.3	58.9	11.9	10419.3	0.530	0.0	0.0	0.0	0.000
				12	10854.5	76.9	5.6	10854.5	0.553	0.0	0.0	0.0	0.000

Verifiche combinazioni di carico dinamiche

Verifica in condizioni **non drenate**

Dati terreno

Terreno	limi-argilloso sabbiosi mediamente addensati
Angolo d'attrito φ	22.70 [°]
Coesione c	0.0 [kg/cm ²]
Coesione non drenata c_u	0.37 [kg/cm ²]
Carico aggiuntivo di superficie q	3900.0 [kg/m ²]
Profondità D	2.20 [m]
Peso proprio terreno γ	1780.0 [kg/m ³]

Fattori parziale di sicurezza del terreno verifiche a scorrimento

$\gamma_{R,Scor}$	1.000
k_1 fattore riduzione di φ	1.000
k_2 fattore riduzione di c	1.000
k_3 fattore riduzione di c_u	1.000

Fattori parziale di sicurezza del terreno

$\gamma_{tg\varphi}$	1.000
γ_c	1.000
γ_{cu}	1.000

Fattori parziale di sicurezza

Verifica di capacità portante	2.300
Verifica a scorrimento	1.100

Fattori di correzione dinamici per combinazioni statiche

z_c	1.000
z_q	1.000
z_g	1.000

Verifiche

Legenda	
B_{eq}	Base del plinto equivalente
H_{eq}	Altezza del plinto equivalente
$H_{Trasporto}$	Quota azioni esterne rispetto alla sezione di verifica
Comb.	Combinazione di carico
N	Azione verticale
M_x	Momento flettente M_x
M_y	Momento flettente M_y
Q_{Ed}	Carico verticale di progetto
$Q_{Rd,T}$	Capacità portante Terzaghi
$Q_{Rd,M}$	Capacità portante Mejerhoff
$Q_{Rd,EC7}$	Capacità portante EuroCodice 7
$Q_{Rd,V}$	Capacità portante Vesic
$Q_{Rd,T,PP}$	Capacità portante Terzaghi con correzione Paolucci-Pecker
$Q_{Rd,M,PP}$	Capacità portante Mejerhoff con correzione Paolucci-Pecker
$Q_{Rd,EC7,PP}$	Capacità portante EuroCodice 7 con correzione Paolucci-Pecker
$Q_{Rd,V,PP}$	Capacità portante Vesic con correzione Paolucci-Pecker

$Q_{Rd,T,MN,C}$	Capacità portante Terzaghi con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,M,MN,C}$	Capacità portante Mejerhoff con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,EC7,MN,C}$	Capacità portante EuroCodice 7 con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,V,MN,C}$	Capacità portante Vesic con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,T,MN,C}$	Capacità portante Terzaghi con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,M,MN,C}$	Capacità portante Mejerhoff con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,EC7,MN,C}$	Capacità portante EuroCodice 7 con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,V,MN,C}$	Capacità portante Vesic con correzione Maugeri-Novità con effetto cinematico
F_x	Azione di scorrimento F_x
F_y	Azione di scorrimento F_y
$H_{Ed,d} = \sqrt{F_x^2 + F_y^2}$	Azione di scorrimento totale $H_{Ed} = \sqrt{F_x^2 + F_y^2}$
H_{Rd}	Resistenza allo scorrimento

Elemento	B_{Eq} [m]	H_{Eq} [m]	$H_{Trasporto}$ [m]	Comb.	N [kg]	M_x [kgm]	M_y [kgm]	Q_{Ed} [kg]	$(S/R)_{T,PP}$	F_x [kg]	F_y [kg]	H_{Ed} [kg]	$(S/R)_{Scor}$
1	4.60	4.60	1.90	13	134904.2	14336.3	-55230.9	134904.2	0.467	-7772.8	-792.3	7813.0	0.148
				14	122504.1	14238.7	-54297.3	122504.1	0.424	-8030.8	-826.7	8073.2	0.158
				15	136263.3	-8285.0	-55163.4	136263.3	0.472	-7777.0	3748.6	8633.3	0.157
				16	123863.3	-8382.5	-54229.7	123863.3	0.429	-8035.0	3714.2	8851.9	0.165
				17	135524.4	40636.0	-18853.1	135524.4	0.469	-1264.8	-6120.7	6250.0	0.104
				18	123124.4	40538.5	-17919.5	123124.4	0.427	-1522.8	-6155.1	6340.7	0.107
				19	137414.4	40557.9	12395.5	137414.4	0.476	4309.2	-6147.0	7507.0	0.124
				20	125014.4	40460.3	13329.1	125014.4	0.433	4051.2	-6181.4	7390.6	0.124
				21	141204.2	14075.7	48931.0	141204.2	0.489	10807.1	-879.8	10842.9	0.201
				22	128804.1	13978.1	49864.6	128804.1	0.446	10549.1	-914.2	10588.6	0.203
				23	142563.4	-8545.6	48998.6	142563.4	0.494	10802.9	3661.0	11406.4	0.204
				24	130163.3	-8643.1	49932.2	130163.3	0.451	10544.8	3626.6	11151.1	0.206
				25	140055.0	-34768.1	-18627.8	140055.0	0.485	-1279.0	9015.5	9105.7	0.145
				26	127654.9	-34865.6	-17694.2	127654.9	0.442	-1537.0	8981.1	9111.7	0.147
				27	141945.0	-34846.2	12620.8	141945.0	0.492	4295.0	8989.2	9962.6	0.158
				28	129544.9	-34943.8	13554.4	129544.9	0.449	4037.0	8954.8	9822.7	0.158
				29	151576.8	14358.4	-19863.5	151576.8	0.525	-968.7	-782.9	1245.5	0.019
				30	110243.3	14033.2	-16751.4	110243.3	0.382	-1828.8	-897.6	2037.2	0.033
				31	152936.0	-8262.8	-19795.9	152936.0	0.530	-973.0	3757.9	3881.8	0.058
				32	111602.5	-8588.0	-16683.8	111602.5	0.387	-1833.0	3643.3	4078.4	0.063
				33	153466.8	14280.2	11385.1	153466.8	0.532	4605.3	-809.2	4675.8	0.072
				34	112133.3	13955.0	14497.2	112133.3	0.388	3745.2	-923.8	3857.4	0.062
				35	154826.0	-8341.0	11452.7	154826.0	0.536	4601.0	3731.7	5924.1	0.089
				36	113492.5	-8666.2	14564.8	113492.5	0.393	3740.9	3617.0	5203.6	0.080
2	4.60	4.60	1.90	13	169995.1	14254.2	-43313.2	169995.1	0.589	-9246.5	-379.4	9254.3	0.160
				14	154208.4	14965.5	-42584.7	154208.4	0.534	-9423.2	-55.4	9423.3	0.167
				15	170769.6	-21458.0	-43254.4	170769.6	0.592	-9249.7	5293.9	10657.5	0.182
				16	154983.0	-20746.7	-42525.9	154983.0	0.537	-9426.3	5617.9	10973.4	0.191
				17	168896.1	55924.1	-14062.8	168896.1	0.585	-2695.5	-6997.2	7498.4	0.124
				18	153109.5	56635.4	-13334.3	153109.5	0.530	-2872.1	-6673.1	7265.0	0.123
				19	168728.6	55928.9	11067.8	168728.6	0.585	2916.7	-6996.2	7579.8	0.125
				20	152942.0	56640.3	11796.3	152942.0	0.530	2740.1	-6672.2	7212.9	0.122
				21	169436.7	14270.4	40455.6	169436.7	0.587	9460.7	-376.1	9468.1	0.162
				22	153650.0	14981.7	41184.1	153650.0	0.532	9284.0	-52.1	9284.2	0.163
				23	170211.2	-21441.8	40514.5	170211.2	0.590	9457.5	5297.2	10840.0	0.184
				24	154424.6	-20730.5	41243.0	154424.6	0.535	9280.9	5621.2	10850.5	0.188
				25	171477.9	-63116.6	-13866.6	171477.9	0.594	-2705.9	11913.9	12217.4	0.201
				26	155691.2	-62405.2	-13138.1	155691.2	0.539	-2882.5	12238.0	12572.9	0.209
				27	171310.4	-63111.7	11264.0	171310.4	0.593	2906.2	11914.9	12264.3	0.201
				28	155523.7	-62400.4	11992.5	155523.7	0.539	2729.6	12239.0	12539.7	0.208
				29	188217.5	13429.9	-14844.1	188217.5	0.652	-2493.1	-756.3	2605.3	0.039
				30	135595.3	15801.1	-12415.7	135595.3	0.470	-3081.8	323.8	3098.8	0.049
				31	188992.0	-22282.2	-14785.3	188992.0	0.655	-2496.2	4917.0	5514.4	0.084
				32	136369.9	-19911.1	-12356.8	136369.9	0.472	-3084.9	5997.1	6744.0	0.103

				33	188050.0	13434.8	10286.5	188050.0	0.651	3119.1	-755.3	3209.2	0.048
				34	135427.8	15806.0	12715.0	135427.8	0.469	2530.4	324.8	2551.1	0.040
				35	188824.5	-22277.4	10345.4	188824.5	0.654	3115.9	4918.0	5822.0	0.088
				36	136202.4	-19906.2	12773.8	136202.4	0.472	2527.2	5998.1	6508.8	0.100
3	4.60	4.60	1.90	13	169827.5	14965.4	-42308.6	169827.5	0.588	-9343.0	-413.3	9352.2	0.161
				14	154213.5	15676.8	-42401.9	154213.5	0.534	-9320.8	-91.9	9321.2	0.165
				15	170612.9	-22378.4	-42316.9	170612.9	0.591	-9342.7	5353.7	10767.9	0.184
				16	154998.9	-21667.0	-42410.1	154998.9	0.537	-9320.5	5675.2	10912.3	0.190
				17	168978.5	58530.7	-12609.9	168978.5	0.585	-2812.3	-7141.9	7675.7	0.128
				18	153364.4	59242.1	-12703.2	153364.4	0.531	-2790.1	-6820.5	7369.1	0.126
				19	169036.0	58528.7	12837.9	169036.0	0.586	2785.9	-7142.3	7666.4	0.128
				20	153421.9	59240.1	12744.6	153421.9	0.531	2808.1	-6820.8	7376.2	0.126
				21	170019.3	14958.6	42517.5	170019.3	0.589	9317.5	-414.4	9326.7	0.161
				22	154405.2	15670.0	42424.2	154405.2	0.535	9339.8	-93.0	9340.2	0.165
				23	170804.7	-22385.1	42509.3	170804.7	0.592	9317.9	5352.6	10745.8	0.184
				24	155190.6	-21673.8	42416.0	155190.6	0.538	9340.1	5674.1	10928.5	0.190
				25	171596.5	-65948.5	-12637.3	171596.5	0.594	-2811.3	12081.6	12404.3	0.205
				26	155982.4	-65237.1	-12730.6	155982.4	0.540	-2789.0	12403.0	12712.7	0.213
				27	171654.0	-65950.5	12810.5	171654.0	0.595	2786.9	12081.2	12398.5	0.205
				28	156039.9	-65239.1	12717.2	156039.9	0.541	2809.1	12402.7	12716.8	0.213
				29	188111.2	14133.1	-12510.7	188111.2	0.652	-2837.9	-788.7	2945.4	0.044
				30	136064.3	16504.3	-12821.6	136064.3	0.471	-2763.8	282.7	2778.2	0.044
				31	188896.6	-23210.7	-12518.9	188896.6	0.654	-2837.6	4978.3	5730.2	0.087
				32	136849.7	-20839.5	-12829.9	136849.7	0.474	-2763.5	6049.8	6651.1	0.102
				33	188168.7	14131.0	12937.2	188168.7	0.652	2760.3	-789.1	2870.9	0.043
				34	136121.8	16502.3	12626.2	136121.8	0.472	2834.4	282.4	2848.4	0.045
				35	188954.1	-23212.7	12929.0	188954.1	0.655	2760.6	4978.0	5692.2	0.086
				36	136907.2	-20841.5	12618.0	136907.2	0.474	2834.7	6049.5	6680.7	0.103
4	4.60	4.60	1.90	13	170019.6	14958.6	-42517.4	170019.6	0.589	-9317.2	-414.4	9326.4	0.161
				14	154405.6	15670.0	-42424.0	154405.6	0.535	-9339.5	-93.0	9339.9	0.165
				15	170805.1	-22385.2	-42509.3	170805.1	0.592	-9317.5	5352.6	10745.5	0.184
				16	155191.0	-21673.8	-42416.0	155191.0	0.538	-9339.7	5674.1	10928.2	0.190
				17	169036.1	58528.7	-12837.6	169036.1	0.586	-2785.8	-7142.3	7666.3	0.128
				18	153422.0	59240.1	-12744.3	153422.0	0.531	-2808.1	-6820.8	7376.2	0.126
				19	168978.6	58530.8	12610.2	168978.6	0.585	2812.3	-7141.9	7675.7	0.128
				20	153364.5	59242.1	12703.5	153364.5	0.531	2790.1	-6820.5	7369.1	0.126
				21	169827.9	14965.4	42308.8	169827.9	0.588	9343.3	-413.3	9352.5	0.161
				22	154213.9	15676.7	42402.1	154213.9	0.534	9321.1	-91.9	9321.6	0.165
				23	170613.4	-22378.4	42316.8	170613.4	0.591	9343.1	5353.7	10768.2	0.184
				24	154999.3	-21667.0	42410.1	154999.3	0.537	9320.8	5675.1	10912.6	0.190
				25	171654.1	-65950.5	-12810.8	171654.1	0.595	-2786.7	12081.2	12398.5	0.205
				26	156040.1	-65239.2	-12717.5	156040.1	0.541	-2809.0	12402.7	12716.8	0.213
				27	171596.6	-65948.5	12637.0	171596.6	0.594	2811.4	12081.6	12404.4	0.205
				28	155982.5	-65237.1	12730.4	155982.5	0.540	2789.2	12403.0	12712.7	0.213
				29	188168.8	14131.1	-12937.1	188168.8	0.652	-2760.2	-789.1	2870.8	0.043
				30	136121.9	16502.2	-12626.0	136121.9	0.472	-2834.3	282.4	2848.4	0.045
				31	188954.3	-23212.7	-12929.1	188954.3	0.655	-2760.5	4978.0	5692.2	0.086
				32	136907.3	-20841.5	-12618.0	136907.3	0.474	-2834.6	6049.5	6680.6	0.103
				33	188111.3	14133.1	12510.7	188111.3	0.652	2838.0	-788.7	2945.5	0.044
				34	136064.4	16504.3	12821.8	136064.4	0.471	2763.8	282.7	2778.3	0.044
				35	188896.8	-23210.6	12518.8	188896.8	0.654	2837.7	4978.3	5730.3	0.087
				36	136849.8	-20839.5	12829.9	136849.8	0.474	2763.6	6049.8	6651.1	0.102
5	4.60	4.60	1.90	13	169436.9	14270.5	-40455.4	169436.9	0.587	-9460.3	-376.1	9467.8	0.162
				14	153650.3	14981.7	-41183.9	153650.3	0.532	-9283.7	-52.1	9283.9	0.163
				15	170211.5	-21441.7	-40514.5	170211.5	0.590	-9457.2	5297.2	10839.7	0.184
				16	154424.8	-20730.5	-41243.0	154424.8	0.535	-9280.6	5621.2	10850.2	0.188
				17	168728.7	55929.0	-11067.5	168728.7	0.585	-2916.6	-6996.2	7579.7	0.125
				18	152942.0	56640.3	-11795.9	152942.0	0.530	-2740.0	-6672.2	7212.8	0.122
				19	168896.2	55924.1	14063.2	168896.2	0.585	2695.6	-6997.2	7498.4	0.124
				20	153109.6	56635.4	13334.7	153109.6	0.530	2872.2	-6673.2	7265.0	0.123

				21	169995.3	14254.2	43313.4	169995.3	0.589	9246.9	-379.4	9254.7	0.160
				22	154208.7	14965.5	42584.9	154208.7	0.534	9423.5	-55.4	9423.7	0.167
				23	170769.8	-21458.0	43254.3	170769.8	0.592	9250.0	5293.9	10657.8	0.182
				24	154983.2	-20746.7	42525.9	154983.2	0.537	9426.6	5617.9	10973.7	0.191
				25	171310.4	-63111.6	-11264.4	171310.4	0.593	-2906.1	11915.0	12264.2	0.201
				26	155523.8	-62400.4	-11992.9	155523.8	0.539	-2729.5	12239.0	12539.6	0.208
				27	171477.9	-63116.5	13866.3	171477.9	0.594	2706.0	11914.0	12217.4	0.201
				28	155691.3	-62405.3	13137.8	155691.3	0.539	2882.6	12238.0	12572.9	0.209
				29	188050.0	13435.0	-10286.5	188050.0	0.651	-3119.0	-755.3	3209.1	0.048
				30	135427.9	15805.8	-12714.8	135427.9	0.469	-2530.3	324.7	2551.0	0.040
				31	188824.5	-22277.2	-10345.5	188824.5	0.654	-3115.8	4918.1	5822.0	0.088
				32	136202.4	-19906.4	-12773.8	136202.4	0.472	-2527.1	5998.1	6508.7	0.100
				33	188217.5	13430.1	14844.2	188217.5	0.652	2493.2	-756.3	2605.4	0.039
				34	135595.4	15801.0	12415.9	135595.4	0.470	3081.9	323.7	3098.8	0.049
				35	188992.0	-22282.1	14785.1	188992.0	0.655	2496.3	4917.1	5514.5	0.084
				36	136369.9	-19911.2	12356.8	136369.9	0.472	3085.0	5997.1	6744.0	0.103
6	4.60	4.60	1.90	13	141206.7	14080.8	-48931.3	141206.7	0.489	-10807.2	-878.6	10842.9	0.201
				14	128806.6	13982.2	-49865.1	128806.6	0.446	-10549.2	-913.1	10588.7	0.203
				15	142565.8	-8540.4	-48998.2	142565.8	0.494	-10803.1	3662.3	11407.0	0.204
				16	130165.7	-8639.0	-49932.0	130165.7	0.451	-10545.1	3627.8	11151.7	0.206
				17	137415.2	40559.7	-12396.6	137415.2	0.476	-4309.0	-6146.6	7506.5	0.124
				18	125015.1	40461.2	-13330.4	125015.1	0.433	-4051.0	-6181.1	7390.3	0.124
				19	135525.3	40634.5	18852.0	135525.3	0.469	1265.0	-6121.2	6250.6	0.104
				20	123125.2	40536.0	17918.2	123125.2	0.427	1522.9	-6155.7	6341.3	0.107
				21	134907.0	14330.1	55230.6	134907.0	0.467	7772.6	-794.0	7813.1	0.148
				22	122506.9	14231.5	54296.8	122506.9	0.424	8030.6	-828.5	8073.2	0.158
				23	136266.1	-8291.1	55163.7	136266.1	0.472	7776.8	3746.8	8632.3	0.157
				24	123866.0	-8389.7	54230.0	123866.0	0.429	8034.7	3712.4	8850.9	0.165
				25	141945.7	-34844.3	-12619.5	141945.7	0.492	-4295.3	8989.6	9963.1	0.158
				26	129545.6	-34942.9	-13553.3	129545.6	0.449	-4037.3	8955.1	9823.2	0.158
				27	140055.8	-34769.5	18629.0	140055.8	0.485	1278.7	9015.0	9105.2	0.145
				28	127655.7	-34868.1	17695.3	127655.7	0.442	1536.6	8980.5	9111.0	0.147
				29	153467.6	14283.3	-11385.3	153467.6	0.532	-4605.1	-808.7	4675.6	0.072
				30	112134.0	13954.7	-14497.8	112134.0	0.388	-3745.3	-923.6	3857.5	0.062
				31	154826.8	-8337.9	-11452.1	154826.8	0.536	-4601.0	3732.1	5924.4	0.089
				32	113493.2	-8666.5	-14564.7	113493.2	0.393	-3741.2	3617.3	5203.9	0.080
				33	151577.7	14358.1	19863.3	151577.7	0.525	968.8	-783.4	1245.9	0.019
				34	110244.1	14029.5	16750.8	110244.1	0.382	1828.7	-898.2	2037.4	0.033
				35	152936.9	-8263.1	19796.5	152936.9	0.530	972.9	3757.5	3881.4	0.058
				36	111603.3	-8591.7	16683.9	111603.3	0.387	1832.8	3642.6	4077.7	0.063
7	3.50	3.50	1.90	13	80412.1	2786.7	-31759.6	80412.1	0.481	-5625.0	-2124.1	6012.7	0.211
				14	73081.5	2728.3	-31735.5	73081.5	0.437	-5642.8	-2167.1	6044.6	0.222
				15	83393.4	-6600.2	-31725.7	83393.4	0.499	-5630.9	2067.4	5998.4	0.209
				16	76062.8	-6658.7	-31701.6	76062.8	0.455	-5648.7	2024.3	6000.4	0.218
				17	76984.4	13678.6	-9670.2	76984.4	0.461	-1672.4	-7056.9	7252.3	0.195
				18	69653.8	13620.1	-9646.0	69653.8	0.417	-1690.2	-7100.0	7298.4	0.198
				19	77027.6	13627.7	9297.5	77027.6	0.461	1709.7	-7093.4	7296.6	0.195
				20	69697.0	13569.2	9321.7	69697.0	0.417	1691.9	-7136.5	7334.3	0.198
				21	80556.2	2617.2	31466.0	80556.2	0.482	5648.7	-2245.9	6078.8	0.213
				22	73225.6	2558.8	31490.2	73225.6	0.438	5630.9	-2288.9	6078.4	0.223
				23	83537.5	-6769.7	31499.9	83537.5	0.500	5642.9	1945.6	5968.9	0.208
				24	76206.9	-6828.2	31524.1	76206.9	0.456	5625.1	1902.5	5938.1	0.216
				25	86922.1	-17611.1	-9557.2	86922.1	0.520	-1691.9	6914.7	7118.7	0.194
				26	79591.6	-17669.6	-9533.1	79591.6	0.476	-1709.7	6871.6	7081.1	0.196
				27	86965.4	-17662.0	9410.5	86965.4	0.520	1690.2	6878.1	7082.8	0.193
				28	79634.8	-17720.5	9434.6	79634.8	0.477	1672.4	6835.1	7036.7	0.194
				29	89014.9	2795.4	-9658.8	89014.9	0.533	-1658.5	-2116.6	2688.9	0.072
				30	64579.6	2600.5	-9578.3	64579.6	0.386	-1717.8	-2260.2	2838.9	0.079
				31	91996.3	-6591.5	-9624.9	91996.3	0.550	-1664.3	2074.9	2659.9	0.071
				32	67561.0	-6786.4	-9544.4	67561.0	0.404	-1723.6	1931.3	2588.6	0.072

				33	89058.2	2744.5	9308.9	89058.2	0.533	1723.7	-2153.1	2758.1	0.073
				34	64622.9	2549.6	9389.4	64622.9	0.387	1664.3	-2296.7	2836.3	0.079
				35	92039.5	-6642.4	9342.8	92039.5	0.551	1717.8	2038.3	2665.7	0.071
				36	67604.2	-6837.3	9423.3	67604.2	0.405	1658.5	1894.8	2518.1	0.070
8	3.50	3.50	1.90	13	80555.4	2619.6	-31460.7	80555.4	0.482	-5650.7	-2244.7	6080.2	0.213
				14	73224.8	2560.7	-31500.0	73224.8	0.438	-5630.4	-2287.9	6077.5	0.223
				15	83536.8	-6767.3	-31492.4	83536.8	0.500	-5644.7	1946.7	5970.9	0.208
				16	76206.1	-6826.2	-31531.7	76206.1	0.456	-5624.4	1903.5	5937.8	0.216
				17	77027.4	13628.6	-9294.0	77027.4	0.461	-1711.4	-7093.0	7296.6	0.195
				18	69696.8	13569.6	-9333.2	69696.8	0.417	-1691.2	-7136.2	7333.9	0.198
				19	76984.7	13677.8	9674.4	76984.7	0.461	1671.2	-7057.3	7252.5	0.195
				20	69654.1	13618.9	9635.1	69654.1	0.417	1691.4	-7100.5	7299.2	0.198
				21	80413.2	2783.7	31767.3	80413.2	0.481	5624.5	-2125.7	6012.8	0.211
				22	73082.6	2724.8	31728.0	73082.6	0.437	5644.8	-2168.9	6047.1	0.222
				23	83394.6	-6603.2	31735.6	83394.6	0.499	5630.6	2065.8	5997.5	0.209
				24	76064.0	-6662.1	31696.3	76064.0	0.455	5650.8	2022.6	6001.9	0.218
				25	86965.2	-17661.1	-9399.6	86965.2	0.520	-1691.4	6878.5	7083.4	0.193
				26	79634.5	-17720.1	-9438.9	79634.5	0.477	-1671.1	6835.3	7036.6	0.194
				27	86922.5	-17611.9	9568.8	86922.5	0.520	1691.2	6914.2	7118.1	0.194
				28	79591.9	-17670.8	9529.5	79591.9	0.476	1711.4	6871.0	7081.0	0.196
				29	89058.0	2746.0	-9285.1	89058.0	0.533	-1728.0	-2152.6	2760.4	0.074
				30	64622.6	2549.5	-9416.0	64622.6	0.387	-1660.5	-2296.6	2834.0	0.079
				31	92039.3	-6640.9	-9316.8	92039.3	0.551	-1722.0	2038.9	2668.8	0.071
				32	67603.9	-6837.4	-9447.7	67603.9	0.405	-1654.5	1894.9	2515.5	0.070
				33	89015.3	2795.2	9683.3	89015.3	0.533	1654.6	-2116.9	2686.8	0.072
				34	64579.9	2598.7	9552.3	64579.9	0.386	1722.0	-2260.9	2842.0	0.079
				35	91996.7	-6591.7	9651.6	91996.7	0.551	1660.6	2074.6	2657.3	0.071
				36	67561.3	-6788.2	9520.7	67561.3	0.404	1728.0	1930.6	2591.0	0.072
9	3.50	3.50	1.90	13	83393.8	6602.6	-31727.0	83393.8	0.499	-5631.3	-2066.3	5998.4	0.209
				14	76063.2	6661.6	-31702.9	76063.2	0.455	-5649.1	-2023.0	6000.4	0.218
				15	80412.5	-2784.3	-31759.8	80412.5	0.481	-5625.6	2125.2	6013.7	0.211
				16	73081.9	-2725.3	-31735.7	73081.9	0.437	-5643.4	2168.4	6045.6	0.222
				17	86922.3	17611.7	-9559.4	86922.3	0.520	-1691.8	-6914.4	7118.3	0.194
				18	79591.7	17670.7	-9535.3	79591.7	0.476	-1709.6	-6871.2	7080.6	0.196
				19	86965.4	17661.3	9408.7	86965.4	0.520	1690.6	-6878.4	7083.1	0.193
				20	79634.8	17720.3	9432.8	79634.8	0.477	1672.9	-6835.2	7036.9	0.194
				21	83537.5	6767.8	31499.9	83537.5	0.500	5643.4	-1946.4	5969.7	0.208
				22	76206.9	6826.8	31523.9	76206.9	0.456	5625.7	-1903.1	5938.9	0.216
				23	80556.1	-2619.1	31467.1	80556.1	0.482	5649.1	2245.1	6078.9	0.213
				24	73225.5	-2560.1	31491.2	73225.5	0.438	5631.4	2288.3	6078.6	0.223
				25	76984.5	-13678.0	-9668.6	76984.5	0.461	-1672.9	7057.2	7252.7	0.195
				26	69653.9	-13619.0	-9644.5	69653.9	0.417	-1690.6	7100.4	7298.9	0.198
				27	77027.6	-13628.4	9299.5	77027.6	0.461	1709.6	7093.1	7296.2	0.195
				28	69697.0	-13569.4	9323.6	69697.0	0.417	1691.8	7136.3	7334.1	0.198
				29	91996.5	6591.5	-9625.6	91996.5	0.550	-1664.5	-2074.8	2659.9	0.071
				30	67561.1	6788.2	-9545.4	67561.1	0.404	-1723.6	-1930.7	2588.2	0.072
				31	89015.1	-2795.4	-9658.4	89015.1	0.533	-1658.8	2116.7	2689.2	0.072
				32	64579.7	-2598.7	-9578.2	64579.7	0.386	-1717.9	2260.8	2839.4	0.079
				33	92039.6	6641.0	9342.4	92039.6	0.551	1718.0	-2038.8	2666.1	0.071
				34	67604.2	6837.7	9422.6	67604.2	0.405	1658.8	-1894.7	2518.3	0.070
				35	89058.2	-2745.9	9309.7	89058.2	0.533	1723.7	2152.7	2757.7	0.073
				36	64622.8	-2549.2	9389.9	64622.8	0.387	1664.5	2296.7	2836.4	0.079
10	3.50	3.50	1.90	13	83538.4	6770.5	-31493.5	83538.4	0.500	-5645.1	-1945.0	5970.7	0.208
				14	76207.8	6829.0	-31532.6	76207.8	0.456	-5624.9	-1901.9	5937.7	0.216
				15	80557.0	-2616.4	-31460.7	80557.0	0.482	-5651.2	2246.5	6081.4	0.213
				16	73226.5	-2557.9	-31499.9	73226.5	0.438	-5631.0	2289.6	6078.7	0.223
				17	86965.7	17662.2	-9401.5	86965.7	0.520	-1691.2	-6877.9	7082.8	0.193
				18	79635.1	17720.8	-9440.6	79635.1	0.477	-1671.1	-6834.9	7036.2	0.194
				19	86922.0	17611.1	9567.3	86922.0	0.520	1691.6	-6914.7	7118.7	0.194
				20	79591.4	17669.6	9528.1	79591.4	0.476	1711.8	-6871.7	7081.7	0.196

				21	83392.8	6600.0	31735.7	83392.8	0.499	5631.2	-2067.6	5998.8	0.209
				22	76062.2	6658.5	31696.6	76062.2	0.455	5651.4	-2024.6	6003.1	0.218
				23	80411.4	-2787.0	31768.5	80411.4	0.481	5625.0	2123.8	6012.6	0.211
				24	73080.9	-2728.4	31729.3	73080.9	0.437	5645.2	2166.9	6046.8	0.222
				25	77027.8	-13627.4	-9292.3	77027.8	0.461	-1711.8	7093.6	7297.2	0.195
				26	69697.3	-13568.9	-9331.5	69697.3	0.417	-1691.6	7136.7	7334.4	0.198
				27	76984.2	-13678.6	9676.4	76984.2	0.461	1671.1	7056.8	7251.9	0.195
				28	69653.6	-13620.1	9637.3	69653.6	0.417	1691.3	7099.9	7298.5	0.198
				29	92039.8	6642.6	-9317.6	92039.8	0.551	-1722.0	-2038.2	2668.2	0.071
				30	67604.5	6837.6	-9448.1	67604.5	0.405	-1654.7	-1894.6	2515.4	0.070
				31	89058.4	-2744.3	-9284.8	89058.4	0.533	-1728.2	2153.3	2761.0	0.074
				32	64623.2	-2549.3	-9415.4	64623.2	0.387	-1660.8	2296.9	2834.5	0.079
				33	91996.1	6591.4	9651.2	91996.1	0.550	1660.9	-2075.0	2657.8	0.071
				34	67560.8	6786.5	9520.7	67560.8	0.404	1728.2	-1931.4	2591.7	0.072
				35	89014.7	-2795.5	9683.9	89014.7	0.533	1654.7	2116.5	2686.6	0.072
				36	64579.5	-2600.4	9553.4	64579.5	0.386	1722.0	2260.1	2841.4	0.079
11	4.60	4.60	1.90	13	136255.8	8290.4	-55524.8	136255.8	0.472	-7828.4	-3747.2	8679.0	0.158
				14	123854.5	8389.0	-54595.6	123854.5	0.429	-8085.4	-3712.7	8897.1	0.166
				15	134896.7	-14330.8	-55592.1	134896.7	0.467	-7824.2	793.7	7864.3	0.149
				16	122495.3	-14232.1	-54663.0	122495.3	0.424	-8081.2	828.1	8123.5	0.159
				17	140054.7	34769.4	-18742.4	140054.7	0.485	-1294.6	-9015.0	9107.5	0.145
				18	127653.3	34868.0	-17813.3	127653.3	0.442	-1551.6	-8980.5	9113.6	0.147
				19	141951.0	34844.8	12717.9	141951.0	0.492	4310.0	-8989.4	9969.3	0.158
				20	129549.7	34943.4	13647.0	129549.7	0.449	4053.0	-8955.0	9829.5	0.158
				21	142576.9	8541.6	49342.9	142576.9	0.494	10853.6	-3661.9	11454.7	0.206
				22	130175.5	8640.2	50272.1	130175.5	0.451	10596.6	-3627.4	11200.3	0.207
				23	141217.7	-14079.6	49275.5	141217.7	0.489	10857.9	878.9	10893.4	0.203
				24	128816.4	-13981.0	50204.7	128816.4	0.446	10600.9	913.4	10640.2	0.204
				25	135524.3	-40634.5	-18967.0	135524.3	0.469	-1280.4	6121.1	6253.5	0.104
				26	123123.0	-40535.9	-18037.9	123123.0	0.427	-1537.4	6155.5	6344.6	0.107
				27	137420.6	-40559.2	12493.3	137420.6	0.476	4324.2	6146.6	7515.3	0.124
				28	125019.3	-40460.5	13422.4	125019.3	0.433	4067.2	6181.1	7399.2	0.125
				29	152937.3	8263.0	-19905.1	152937.3	0.530	-989.8	-3757.6	3885.8	0.058
				30	111599.5	8591.7	-16807.9	111599.5	0.387	-1846.5	-3642.7	4084.0	0.063
				31	151578.2	-14358.2	-19972.4	151578.2	0.525	-985.5	783.2	1258.9	0.020
				32	110240.3	-14029.5	-16875.3	110240.3	0.382	-1842.2	898.1	2049.5	0.033
				33	154833.6	8338.3	11555.2	154833.6	0.536	4614.8	-3732.0	5935.0	0.089
				34	113495.8	8667.1	14652.4	113495.8	0.393	3758.2	-3617.1	5216.1	0.081
				35	153474.5	-14282.9	11487.9	153474.5	0.532	4619.1	808.8	4689.4	0.073
				36	112136.7	-13954.1	14585.0	112136.7	0.388	3762.4	923.7	3874.1	0.062
12	4.60	4.60	1.90	13	171048.6	21468.8	-43556.8	171048.6	0.593	-9287.7	-5293.4	10690.3	0.183
				14	155290.9	20759.0	-42826.2	155290.9	0.538	-9464.6	-5617.1	11006.0	0.192
				15	170276.5	-14244.1	-43616.4	170276.5	0.590	-9284.1	378.7	9291.9	0.160
				16	154518.8	-14954.0	-42885.8	154518.8	0.535	-9461.1	55.1	9461.2	0.167
				17	171736.8	63127.1	-13970.8	171736.8	0.595	-2717.6	-11912.1	12218.2	0.201
				18	155979.2	62417.2	-13240.2	155979.2	0.540	-2894.6	-12235.8	12573.5	0.209
				19	171555.1	63121.3	11329.0	171555.1	0.594	2917.5	-11913.2	12265.2	0.201
				20	155797.5	62411.4	12059.6	155797.5	0.540	2740.6	-12236.8	12540.0	0.208
				21	170442.9	21449.4	40775.9	170442.9	0.590	9496.1	-5296.9	10873.5	0.185
				22	154685.2	20739.6	41506.5	154685.2	0.536	9319.2	-5620.5	10882.9	0.189
				23	169670.8	-14263.5	40716.3	169670.8	0.588	9499.7	375.3	9507.1	0.163
				24	153913.2	-14973.4	41446.9	153913.2	0.533	9322.8	51.6	9322.9	0.164
				25	169163.2	-55916.1	-14169.5	169163.2	0.586	-2705.7	6995.0	7500.1	0.125
				26	153405.6	-56625.9	-13438.9	153405.6	0.531	-2882.7	6671.4	7267.5	0.123
				27	168981.5	-55921.9	11130.3	168981.5	0.585	2929.4	6994.0	7582.7	0.125
				28	153223.9	-56631.7	11860.9	153223.9	0.531	2752.5	6670.3	7215.9	0.122
				29	189220.0	22290.1	-14892.7	189220.0	0.656	-2507.1	-4917.0	5519.3	0.084
				30	136694.5	19924.0	-12457.4	136694.5	0.474	-3096.8	-5995.9	6748.4	0.103
				31	188447.9	-13422.8	-14952.3	188447.9	0.653	-2503.5	755.1	2614.9	0.040
				32	135922.4	-15789.0	-12517.0	135922.4	0.471	-3093.2	-323.8	3110.1	0.049

				33	189038.3	22284.3	10407.1	189038.3	0.655	3128.1	-4918.0	5828.6	0.088
				34	136512.8	19918.1	12842.4	136512.8	0.473	2538.3	-5996.9	6512.0	0.100
				35	188266.2	-13428.6	10347.5	188266.2	0.652	3131.7	754.1	3221.2	0.048
				36	135740.7	-15794.8	12782.8	135740.7	0.470	2541.9	-324.8	2562.6	0.040
13	4.60	4.60	1.90	13	171470.6	22405.2	-42655.9	171470.6	0.594	-8817.9	-5331.0	10304.1	0.176
				14	155840.5	21777.2	-42765.4	155840.5	0.540	-8795.7	-5538.7	10394.3	0.181
				15	170674.9	-15017.3	-42648.2	170674.9	0.591	-8818.4	278.7	8822.8	0.152
				16	155044.8	-15645.3	-42757.8	155044.8	0.537	-8796.3	71.0	8796.5	0.155
				17	172251.6	66059.8	-12739.5	172251.6	0.597	-2653.3	-11875.9	12168.7	0.201
				18	156621.5	65431.8	-12849.0	156621.5	0.543	-2631.1	-12083.6	12366.7	0.207
				19	172125.8	66055.6	12910.8	172125.8	0.596	2630.1	-11876.1	12163.9	0.201
				20	156495.8	65427.6	12801.3	156495.8	0.542	2652.2	-12083.8	12371.4	0.207
				21	171051.3	22391.3	42845.2	171051.3	0.593	8793.2	-5331.7	10283.4	0.176
				22	155421.2	21763.3	42735.6	155421.2	0.538	8815.4	-5539.4	10411.4	0.181
				23	170255.6	-15031.1	42852.8	170255.6	0.590	8792.7	278.0	8797.0	0.151
				24	154625.5	-15659.1	42743.3	154625.5	0.536	8814.8	70.3	8815.1	0.156
				25	169599.2	-58681.6	-12713.9	169599.2	0.588	-2655.2	6823.1	7321.5	0.122
				26	153969.2	-59309.6	-12823.5	153969.2	0.533	-2633.0	6615.4	7120.1	0.121
				27	169473.4	-58685.8	12936.4	169473.4	0.587	2628.1	6822.9	7311.5	0.122
				28	153843.4	-59313.8	12826.9	153843.4	0.533	2650.3	6615.2	7126.4	0.121
				29	189558.4	23133.0	-12602.7	189558.4	0.657	-2679.8	-5089.0	5751.5	0.087
				30	137458.2	21039.6	-12967.9	137458.2	0.476	-2605.9	-5781.2	6341.4	0.098
				31	188762.6	-14289.5	-12595.0	188762.6	0.654	-2680.4	520.7	2730.5	0.041
				32	136662.4	-16382.8	-12960.2	136662.4	0.473	-2606.5	-171.5	2612.1	0.041
				33	189432.6	23128.8	13047.6	189432.6	0.656	2603.5	-5089.2	5716.5	0.086
				34	137332.4	21035.5	12682.4	137332.4	0.476	2677.4	-5781.4	6371.3	0.098
				35	188636.8	-14293.6	13055.3	188636.8	0.653	2602.9	520.5	2654.5	0.040
				36	136536.6	-16387.0	12690.1	136536.6	0.473	2676.9	-171.7	2682.4	0.042
14	4.60	4.60	1.90	13	171049.7	22391.3	-42845.3	171049.7	0.593	-8793.3	-5331.7	10283.5	0.176
				14	155419.7	21763.2	-42735.7	155419.7	0.538	-8815.5	-5539.4	10411.4	0.181
				15	170254.0	-15031.2	-42852.8	170254.0	0.590	-8792.8	278.0	8797.2	0.151
				16	154623.9	-15659.2	-42743.2	154623.9	0.536	-8815.0	70.3	8815.3	0.156
				17	172125.4	66055.6	-12911.1	172125.4	0.596	-2630.0	-11876.1	12163.9	0.201
				18	156495.3	65427.6	-12801.5	156495.3	0.542	-2652.2	-12083.8	12371.4	0.207
				19	172251.2	66059.8	12739.2	172251.2	0.597	2653.3	-11876.1	12168.9	0.201
				20	156621.1	65431.8	12848.8	156621.1	0.543	2631.1	-12083.8	12366.9	0.207
				21	171469.0	22405.1	42655.8	171469.0	0.594	8817.8	-5331.7	10304.4	0.176
				22	155839.0	21777.1	42765.4	155839.0	0.540	8795.6	-5539.4	10394.6	0.181
				23	170673.3	-15017.3	42648.2	170673.3	0.591	8818.3	278.0	8822.7	0.152
				24	155043.3	-15645.3	42757.8	155043.3	0.537	8796.1	70.3	8796.4	0.155
				25	169473.0	-58685.8	-12936.3	169473.0	0.587	-2628.3	6822.9	7311.6	0.122
				26	153842.9	-59313.8	-12826.7	153842.9	0.533	-2650.5	6615.2	7126.4	0.122
				27	169598.8	-58681.6	12714.1	169598.8	0.588	2655.1	6822.9	7321.3	0.122
				28	153968.7	-59309.7	12823.6	153968.7	0.533	2632.9	6615.2	7119.9	0.121
				29	189432.1	23128.8	-13047.8	189432.1	0.656	-2603.5	-5089.2	5716.5	0.086
				30	137331.9	21035.4	-12682.4	137331.9	0.476	-2677.5	-5781.5	6371.3	0.098
				31	188636.4	-14293.6	-13055.3	188636.4	0.653	-2603.0	520.5	2654.5	0.040
				32	136536.2	-16387.0	-12690.0	136536.2	0.473	-2677.0	-171.8	2682.5	0.042
				33	189557.9	23133.0	12602.6	189557.9	0.657	2679.8	-5089.2	5751.6	0.087
				34	137457.7	21039.6	12967.9	137457.7	0.476	2605.8	-5781.5	6341.6	0.098
				35	188762.2	-14289.4	12595.0	188762.2	0.654	2680.4	520.5	2730.4	0.041
				36	136662.0	-16382.9	12960.3	136662.0	0.473	2606.4	-171.8	2612.0	0.041
15	4.60	4.60	1.90	13	170441.4	21449.4	-40776.0	170441.4	0.590	-9495.8	-5296.9	10873.3	0.185
				14	154683.8	20739.5	-41506.5	154683.8	0.536	-9318.9	-5620.6	10882.7	0.189
				15	169669.4	-14263.5	-40716.1	169669.4	0.588	-9499.4	375.3	9506.8	0.163
				16	153911.7	-14973.5	-41446.7	153911.7	0.533	-9322.5	51.6	9322.6	0.164
				17	171554.7	63121.3	-11329.3	171554.7	0.594	-2917.4	-11913.2	12265.2	0.201
				18	155797.0	62411.4	-12059.9	155797.0	0.540	-2740.5	-12236.8	12540.0	0.208
				19	171736.4	63127.1	13970.5	171736.4	0.595	2717.7	-11912.1	12218.2	0.201
				20	155978.7	62417.1	13239.9	155978.7	0.540	2894.6	-12235.8	12573.5	0.209

				21	171047.1	21468.7	43556.7	171047.1	0.593	9288.0	-5293.4	10690.5	0.183
				22	155289.5	20758.8	42826.2	155289.5	0.538	9464.9	-5617.1	11006.2	0.192
				23	170275.1	-14244.3	43616.6	170275.1	0.590	9284.4	378.8	9292.2	0.160
				24	154517.4	-14954.2	42886.0	154517.4	0.535	9461.4	55.1	9461.5	0.167
				25	168981.1	-55921.8	-11129.9	168981.1	0.585	-2929.3	6994.0	7582.7	0.125
				26	153223.5	-56631.8	-11860.5	153223.5	0.531	-2752.4	6670.3	7215.9	0.122
				27	169162.8	-55916.1	14169.9	169162.8	0.586	2705.8	6995.0	7500.2	0.125
				28	153405.2	-56626.0	13439.3	153405.2	0.531	2882.8	6671.4	7267.6	0.123
				29	189037.9	22284.4	-10407.2	189037.9	0.655	-3128.0	-4918.0	5828.5	0.088
				30	136512.3	19918.0	-12842.4	136512.3	0.473	-2538.3	-5997.0	6512.0	0.100
				31	188265.8	-13428.5	-10347.4	188265.8	0.652	-3131.6	754.1	3221.1	0.048
				32	135740.3	-15794.9	-12782.6	135740.3	0.470	-2541.8	-324.8	2562.5	0.040
				33	189219.6	22290.2	14892.6	189219.6	0.655	2507.1	-4917.0	5519.3	0.084
				34	136694.1	19923.8	12457.4	136694.1	0.474	3096.9	-5995.9	6748.5	0.103
				35	188447.5	-13422.7	14952.4	188447.5	0.653	2503.6	755.2	2615.0	0.040
				36	135922.0	-15789.2	12517.2	135922.0	0.471	3093.3	-323.8	3110.2	0.049
16	4.60	4.60	1.90	13	142579.5	8547.1	-49342.6	142579.5	0.494	-10853.9	-3660.5	11454.5	0.206
				14	130178.2	8644.7	-50271.9	130178.2	0.451	-10596.9	-3626.1	11200.2	0.207
				15	141220.4	-14074.1	-49275.9	141220.4	0.489	-10858.0	880.3	10893.6	0.203
				16	128819.1	-13976.5	-50205.2	128819.1	0.446	-10601.0	914.7	10640.4	0.204
				17	141951.8	34846.8	-12716.6	141951.8	0.492	-4310.3	-8989.0	9969.0	0.158
				18	129550.5	34944.4	-13645.9	129550.5	0.449	-4053.4	-8954.6	9829.3	0.158
				19	140055.4	34768.1	18743.7	140055.4	0.485	1294.3	-9015.5	9107.9	0.145
				20	127654.1	34865.7	17814.4	127654.1	0.442	1551.2	-8981.1	9114.0	0.147
				21	136258.2	8284.7	55525.1	136258.2	0.472	7828.2	-3748.7	8679.5	0.158
				22	123856.9	8382.3	54595.8	123856.9	0.429	8085.1	-3714.3	8897.5	0.166
				23	134899.1	-14336.4	55591.8	134899.1	0.467	7824.1	792.1	7864.0	0.149
				24	122497.8	-14238.8	54662.5	122497.8	0.424	8081.0	826.5	8123.1	0.159
				25	137421.4	-40557.2	-12494.4	137421.4	0.476	-4324.0	6147.1	7515.5	0.124
				26	125020.1	-40459.5	-13423.7	125020.1	0.433	-4067.0	6181.5	7399.4	0.125
				27	135525.0	-40635.9	18965.9	135525.0	0.469	1280.6	6120.6	6253.1	0.104
				28	123123.7	-40538.3	18036.6	123123.7	0.427	1537.6	6155.0	6344.1	0.107
				29	154834.4	8341.5	-11554.7	154834.4	0.536	-4614.8	-3731.5	5934.7	0.089
				30	113496.6	8666.9	-14652.3	113496.6	0.393	-3758.4	-3616.9	5216.1	0.081
				31	153475.3	-14279.6	-11488.0	153475.3	0.532	-4618.9	809.3	4689.3	0.073
				32	112137.5	-13954.3	-14585.7	112137.5	0.388	-3762.5	924.0	3874.3	0.062
				33	152938.0	8262.8	19905.6	152938.0	0.530	989.8	-3758.0	3886.1	0.058
				34	111600.2	8588.2	16808.0	111600.2	0.387	1846.2	-3643.3	4084.4	0.063
				35	151578.9	-14358.4	19972.3	151578.9	0.525	985.7	782.9	1258.7	0.020
				36	110241.1	-14033.0	16874.6	110241.1	0.382	1842.1	897.5	2049.1	0.033
17	1.20	1.20	0.40	13	8713.8	-66.5	-162.3	8713.8	0.444	0.0	0.0	0.0	0.000
				14	8110.7	-53.6	-159.6	8110.7	0.413	0.0	0.0	0.0	0.000
				15	7786.5	-26.6	-162.2	7786.5	0.396	0.0	0.0	0.0	0.000
				16	7183.4	-13.7	-159.5	7183.4	0.366	0.0	0.0	0.0	0.000
				17	9793.1	-112.9	-52.5	9793.1	0.499	0.0	0.0	0.0	0.000
				18	9190.0	-100.0	-49.8	9190.0	0.468	0.0	0.0	0.0	0.000
				19	9790.9	-112.8	41.7	9790.9	0.498	0.0	0.0	0.0	0.000
				20	9187.8	-99.9	44.4	9187.8	0.468	0.0	0.0	0.0	0.000
				21	8706.4	-66.0	151.7	8706.4	0.443	0.0	0.0	0.0	0.000
				22	8103.3	-53.2	154.5	8103.3	0.413	0.0	0.0	0.0	0.000
				23	7779.1	-26.1	151.8	7779.1	0.396	0.0	0.0	0.0	0.000
				24	7176.1	-13.2	154.5	7176.1	0.365	0.0	0.0	0.0	0.000
				25	6702.1	20.2	-52.2	6702.1	0.341	0.0	0.0	0.0	0.000
				26	6099.0	33.0	-49.5	6099.0	0.310	0.0	0.0	0.0	0.000
				27	6699.9	20.3	42.0	6699.9	0.341	0.0	0.0	0.0	0.000
				28	6096.8	33.2	44.7	6096.8	0.310	0.0	0.0	0.0	0.000
				29	9414.8	-81.3	-55.6	9414.8	0.479	0.0	0.0	0.0	0.000
				30	7404.5	-38.4	-46.5	7404.5	0.377	0.0	0.0	0.0	0.000
				31	8487.5	-41.4	-55.5	8487.5	0.432	0.0	0.0	0.0	0.000
				32	6477.2	1.5	-46.4	6477.2	0.330	0.0	0.0	0.0	0.000

				33	9412.6	-81.2	38.6	9412.6	0.479	0.0	0.0	0.0	0.000
				34	7402.3	-38.3	47.7	7402.3	0.377	0.0	0.0	0.0	0.000
				35	8485.3	-41.3	38.7	8485.3	0.432	0.0	0.0	0.0	0.000
				36	6475.0	1.6	47.8	6475.0	0.330	0.0	0.0	0.0	0.000
18	1.20	1.20	0.40	13	8731.4	-67.1	-158.6	8731.4	0.444	0.0	0.0	0.0	0.000
				14	8128.8	-54.3	-159.0	8128.8	0.414	0.0	0.0	0.0	0.000
				15	7757.5	-25.5	-158.6	7757.5	0.395	0.0	0.0	0.0	0.000
				16	7154.9	-12.7	-159.0	7154.9	0.364	0.0	0.0	0.0	0.000
				17	9868.1	-115.8	-47.3	9868.1	0.502	0.0	0.0	0.0	0.000
				18	9265.5	-103.0	-47.7	9265.5	0.472	0.0	0.0	0.0	0.000
				19	9868.6	-115.8	48.1	9868.6	0.502	0.0	0.0	0.0	0.000
				20	9266.0	-103.0	47.7	9266.0	0.472	0.0	0.0	0.0	0.000
				21	8732.9	-67.3	159.4	8732.9	0.445	0.0	0.0	0.0	0.000
				22	8130.3	-54.5	159.0	8130.3	0.414	0.0	0.0	0.0	0.000
				23	7759.1	-25.7	159.4	7759.1	0.395	0.0	0.0	0.0	0.000
				24	7156.5	-12.9	159.0	7156.5	0.364	0.0	0.0	0.0	0.000
				25	6621.8	23.0	-47.4	6621.8	0.337	0.0	0.0	0.0	0.000
				26	6019.2	35.8	-47.7	6019.2	0.306	0.0	0.0	0.0	0.000
				27	6622.3	23.0	48.1	6622.3	0.337	0.0	0.0	0.0	0.000
				28	6019.7	35.7	47.7	6019.7	0.306	0.0	0.0	0.0	0.000
				29	9434.9	-82.1	-46.9	9434.9	0.480	0.0	0.0	0.0	0.000
				30	7426.3	-39.5	-48.1	7426.3	0.378	0.0	0.0	0.0	0.000
				31	8461.1	-40.5	-46.9	8461.1	0.431	0.0	0.0	0.0	0.000
				32	6452.4	2.1	-48.1	6452.4	0.328	0.0	0.0	0.0	0.000
				33	9435.4	-82.1	48.5	9435.4	0.480	0.0	0.0	0.0	0.000
				34	7426.8	-39.6	47.3	7426.8	0.378	0.0	0.0	0.0	0.000
				35	8461.5	-40.5	48.5	8461.5	0.431	0.0	0.0	0.0	0.000
				36	6452.9	2.1	47.3	6452.9	0.328	0.0	0.0	0.0	0.000
19	1.20	1.20	0.40	13	8732.9	-67.3	-159.4	8732.9	0.445	0.0	0.0	0.0	0.000
				14	8130.3	-54.5	-159.0	8130.3	0.414	0.0	0.0	0.0	0.000
				15	7759.1	-25.7	-159.4	7759.1	0.395	0.0	0.0	0.0	0.000
				16	7156.5	-12.9	-159.0	7156.5	0.364	0.0	0.0	0.0	0.000
				17	9868.6	-115.8	-48.1	9868.6	0.502	0.0	0.0	0.0	0.000
				18	9266.0	-103.0	-47.7	9266.0	0.472	0.0	0.0	0.0	0.000
				19	9868.1	-115.8	47.3	9868.1	0.502	0.0	0.0	0.0	0.000
				20	9265.5	-103.0	47.7	9265.5	0.472	0.0	0.0	0.0	0.000
				21	8731.4	-67.1	158.6	8731.4	0.444	0.0	0.0	0.0	0.000
				22	8128.8	-54.3	159.0	8128.8	0.414	0.0	0.0	0.0	0.000
				23	7757.5	-25.5	158.6	7757.5	0.395	0.0	0.0	0.0	0.000
				24	7154.9	-12.7	159.0	7154.9	0.364	0.0	0.0	0.0	0.000
				25	6622.3	23.0	-48.1	6622.3	0.337	0.0	0.0	0.0	0.000
				26	6019.7	35.7	-47.7	6019.7	0.306	0.0	0.0	0.0	0.000
				27	6621.8	23.0	47.3	6621.8	0.337	0.0	0.0	0.0	0.000
				28	6019.3	35.8	47.7	6019.3	0.306	0.0	0.0	0.0	0.000
				29	9435.4	-82.1	-48.5	9435.4	0.480	0.0	0.0	0.0	0.000
				30	7426.8	-39.6	-47.3	7426.8	0.378	0.0	0.0	0.0	0.000
				31	8461.5	-40.5	-48.5	8461.5	0.431	0.0	0.0	0.0	0.000
				32	6452.9	2.1	-47.3	6452.9	0.328	0.0	0.0	0.0	0.000
				33	9434.9	-82.1	46.9	9434.9	0.480	0.0	0.0	0.0	0.000
				34	7426.3	-39.5	48.1	7426.3	0.378	0.0	0.0	0.0	0.000
				35	8461.1	-40.5	46.9	8461.1	0.431	0.0	0.0	0.0	0.000
				36	6452.4	2.1	48.1	6452.4	0.328	0.0	0.0	0.0	0.000
20	1.20	1.20	0.40	13	8706.4	-66.0	-151.7	8706.4	0.443	0.0	0.0	0.0	0.000
				14	8103.4	-53.2	-154.5	8103.4	0.413	0.0	0.0	0.0	0.000
				15	7779.1	-26.1	-151.8	7779.1	0.396	0.0	0.0	0.0	0.000
				16	7176.1	-13.2	-154.5	7176.1	0.365	0.0	0.0	0.0	0.000
				17	9790.9	-112.8	-41.7	9790.9	0.498	0.0	0.0	0.0	0.000
				18	9187.8	-99.9	-44.4	9187.8	0.468	0.0	0.0	0.0	0.000
				19	9793.1	-112.9	52.5	9793.1	0.499	0.0	0.0	0.0	0.000
				20	9190.0	-100.0	49.8	9190.0	0.468	0.0	0.0	0.0	0.000

				21	8713.8	-66.5	162.3	8713.8	0.444	0.0	0.0	0.0	0.000
				22	8110.7	-53.6	159.6	8110.7	0.413	0.0	0.0	0.0	0.000
				23	7786.5	-26.6	162.2	7786.5	0.396	0.0	0.0	0.0	0.000
				24	7183.4	-13.7	159.5	7183.4	0.366	0.0	0.0	0.0	0.000
				25	6699.9	20.3	-42.0	6699.9	0.341	0.0	0.0	0.0	0.000
				26	6096.8	33.2	-44.7	6096.8	0.310	0.0	0.0	0.0	0.000
				27	6702.1	20.2	52.2	6702.1	0.341	0.0	0.0	0.0	0.000
				28	6099.0	33.0	49.5	6099.0	0.310	0.0	0.0	0.0	0.000
				29	9412.6	-81.2	-38.6	9412.6	0.479	0.0	0.0	0.0	0.000
				30	7402.3	-38.3	-47.7	7402.3	0.377	0.0	0.0	0.0	0.000
				31	8485.3	-41.3	-38.7	8485.3	0.432	0.0	0.0	0.0	0.000
				32	6475.0	1.6	-47.8	6475.0	0.330	0.0	0.0	0.0	0.000
				33	9414.8	-81.3	55.6	9414.8	0.479	0.0	0.0	0.0	0.000
				34	7404.5	-38.4	46.5	7404.5	0.377	0.0	0.0	0.0	0.000
				35	8487.5	-41.4	55.5	8487.5	0.432	0.0	0.0	0.0	0.000
				36	6477.3	1.5	46.4	6477.3	0.330	0.0	0.0	0.0	0.000
21	1.20	1.20	0.40	13	7789.4	26.8	-162.7	7789.4	0.397	0.0	0.0	0.0	0.000
				14	7186.7	13.9	-159.9	7186.7	0.366	0.0	0.0	0.0	0.000
				15	8716.0	66.7	-162.8	8716.0	0.444	0.0	0.0	0.0	0.000
				16	8113.3	53.8	-160.0	8113.3	0.413	0.0	0.0	0.0	0.000
				17	6705.9	-20.0	-52.4	6705.9	0.341	0.0	0.0	0.0	0.000
				18	6103.2	-32.9	-49.6	6103.2	0.311	0.0	0.0	0.0	0.000
				19	6703.8	-20.2	42.1	6703.8	0.341	0.0	0.0	0.0	0.000
				20	6101.1	-33.0	44.8	6101.1	0.311	0.0	0.0	0.0	0.000
				21	7782.4	26.2	152.2	7782.4	0.396	0.0	0.0	0.0	0.000
				22	7179.7	13.4	154.9	7179.7	0.365	0.0	0.0	0.0	0.000
				23	8708.9	66.2	152.1	8708.9	0.443	0.0	0.0	0.0	0.000
				24	8106.2	53.3	154.8	8106.2	0.413	0.0	0.0	0.0	0.000
				25	9794.5	113.1	-52.7	9794.5	0.499	0.0	0.0	0.0	0.000
				26	9191.8	100.2	-49.9	9191.8	0.468	0.0	0.0	0.0	0.000
				27	9792.4	112.9	41.8	9792.4	0.498	0.0	0.0	0.0	0.000
				28	9189.7	100.1	44.5	9189.7	0.468	0.0	0.0	0.0	0.000
				29	8490.1	41.6	-55.7	8490.1	0.432	0.0	0.0	0.0	0.000
				30	6481.1	-1.3	-46.6	6481.1	0.330	0.0	0.0	0.0	0.000
				31	9416.7	81.5	-55.7	9416.7	0.479	0.0	0.0	0.0	0.000
				32	7407.7	38.7	-46.6	7407.7	0.377	0.0	0.0	0.0	0.000
				33	8488.0	41.4	38.8	8488.0	0.432	0.0	0.0	0.0	0.000
				34	6479.0	-1.4	47.9	6479.0	0.330	0.0	0.0	0.0	0.000
				35	9414.6	81.3	38.7	9414.6	0.479	0.0	0.0	0.0	0.000
				36	7405.6	38.5	47.8	7405.6	0.377	0.0	0.0	0.0	0.000
22	1.20	1.20	0.40	13	7780.8	26.0	-159.1	7780.8	0.396	0.0	0.0	0.0	0.000
				14	7178.9	13.2	-159.5	7178.9	0.365	0.0	0.0	0.0	0.000
				15	8723.0	67.9	-159.1	8723.0	0.444	0.0	0.0	0.0	0.000
				16	8121.1	55.1	-159.5	8121.1	0.413	0.0	0.0	0.0	0.000
				17	6680.6	-23.1	-47.5	6680.6	0.340	0.0	0.0	0.0	0.000
				18	6078.7	-35.9	-47.9	6078.7	0.309	0.0	0.0	0.0	0.000
				19	6679.9	-23.2	48.2	6679.9	0.340	0.0	0.0	0.0	0.000
				20	6078.0	-36.0	47.8	6078.0	0.309	0.0	0.0	0.0	0.000
				21	7778.3	25.6	159.9	7778.3	0.396	0.0	0.0	0.0	0.000
				22	7176.4	12.8	159.5	7176.4	0.365	0.0	0.0	0.0	0.000
				23	8720.5	67.6	159.9	8720.5	0.444	0.0	0.0	0.0	0.000
				24	8118.6	54.8	159.5	8118.6	0.413	0.0	0.0	0.0	0.000
				25	9821.4	116.7	-47.5	9821.4	0.500	0.0	0.0	0.0	0.000
				26	9219.5	103.9	-47.8	9219.5	0.469	0.0	0.0	0.0	0.000
				27	9820.6	116.6	48.2	9820.6	0.500	0.0	0.0	0.0	0.000
				28	9218.7	103.8	47.8	9218.7	0.469	0.0	0.0	0.0	0.000
				29	8482.1	40.8	-47.0	8482.1	0.432	0.0	0.0	0.0	0.000
				30	6475.8	-1.9	-48.3	6475.8	0.330	0.0	0.0	0.0	0.000
				31	9424.4	82.7	-47.0	9424.4	0.480	0.0	0.0	0.0	0.000
				32	7418.0	40.0	-48.3	7418.0	0.378	0.0	0.0	0.0	0.000

				33	8481.4	40.7	48.7	8481.4	0.432	0.0	0.0	0.0	0.000
				34	6475.0	-2.0	47.4	6475.0	0.330	0.0	0.0	0.0	0.000
				35	9423.6	82.6	48.7	9423.6	0.480	0.0	0.0	0.0	0.000
				36	7417.2	39.9	47.4	7417.2	0.378	0.0	0.0	0.0	0.000
23	1.20	1.20	0.40	13	7778.3	25.6	-159.9	7778.3	0.396	0.0	0.0	0.0	0.000
				14	7176.3	12.8	-159.5	7176.3	0.365	0.0	0.0	0.0	0.000
				15	8720.5	67.6	-159.9	8720.5	0.444	0.0	0.0	0.0	0.000
				16	8118.6	54.8	-159.5	8118.6	0.413	0.0	0.0	0.0	0.000
				17	6679.9	-23.2	-48.2	6679.9	0.340	0.0	0.0	0.0	0.000
				18	6078.0	-36.0	-47.8	6078.0	0.309	0.0	0.0	0.0	0.000
				19	6680.6	-23.1	47.5	6680.6	0.340	0.0	0.0	0.0	0.000
				20	6078.7	-35.9	47.9	6078.7	0.309	0.0	0.0	0.0	0.000
				21	7780.8	26.0	159.1	7780.8	0.396	0.0	0.0	0.0	0.000
				22	7178.9	13.2	159.5	7178.9	0.365	0.0	0.0	0.0	0.000
				23	8723.0	67.9	159.1	8723.0	0.444	0.0	0.0	0.0	0.000
				24	8121.1	55.1	159.5	8121.1	0.413	0.0	0.0	0.0	0.000
				25	9820.6	116.6	-48.2	9820.6	0.500	0.0	0.0	0.0	0.000
				26	9218.7	103.8	-47.8	9218.7	0.469	0.0	0.0	0.0	0.000
				27	9821.4	116.7	47.5	9821.4	0.500	0.0	0.0	0.0	0.000
				28	9219.5	103.9	47.8	9219.5	0.469	0.0	0.0	0.0	0.000
				29	8481.4	40.7	-48.7	8481.4	0.432	0.0	0.0	0.0	0.000
				30	6475.0	-2.0	-47.4	6475.0	0.330	0.0	0.0	0.0	0.000
				31	9423.6	82.6	-48.7	9423.6	0.480	0.0	0.0	0.0	0.000
				32	7417.2	39.9	-47.4	7417.2	0.378	0.0	0.0	0.0	0.000
				33	8482.1	40.8	47.0	8482.1	0.432	0.0	0.0	0.0	0.000
				34	6475.8	-1.9	48.3	6475.8	0.330	0.0	0.0	0.0	0.000
				35	9424.4	82.7	47.0	9424.4	0.480	0.0	0.0	0.0	0.000
				36	7418.0	40.0	48.3	7418.0	0.378	0.0	0.0	0.0	0.000
24	1.20	1.20	0.40	13	7782.4	26.2	-152.2	7782.4	0.396	0.0	0.0	0.0	0.000
				14	7179.7	13.4	-154.9	7179.7	0.365	0.0	0.0	0.0	0.000
				15	8709.0	66.2	-152.1	8709.0	0.443	0.0	0.0	0.0	0.000
				16	8106.3	53.3	-154.8	8106.3	0.413	0.0	0.0	0.0	0.000
				17	6703.8	-20.2	-42.1	6703.8	0.341	0.0	0.0	0.0	0.000
				18	6101.1	-33.0	-44.8	6101.1	0.311	0.0	0.0	0.0	0.000
				19	6705.9	-20.0	52.4	6705.9	0.341	0.0	0.0	0.0	0.000
				20	6103.2	-32.9	49.6	6103.2	0.311	0.0	0.0	0.0	0.000
				21	7789.4	26.7	162.7	7789.4	0.397	0.0	0.0	0.0	0.000
				22	7186.7	13.9	159.9	7186.7	0.366	0.0	0.0	0.0	0.000
				23	8716.0	66.7	162.8	8716.0	0.444	0.0	0.0	0.0	0.000
				24	8113.3	53.8	160.0	8113.3	0.413	0.0	0.0	0.0	0.000
				25	9792.4	112.9	-41.8	9792.4	0.498	0.0	0.0	0.0	0.000
				26	9189.7	100.1	-44.5	9189.7	0.468	0.0	0.0	0.0	0.000
				27	9794.5	113.1	52.7	9794.5	0.499	0.0	0.0	0.0	0.000
				28	9191.8	100.2	49.9	9191.8	0.468	0.0	0.0	0.0	0.000
				29	8488.0	41.4	-38.8	8488.0	0.432	0.0	0.0	0.0	0.000
				30	6479.0	-1.4	-47.9	6479.0	0.330	0.0	0.0	0.0	0.000
				31	9414.6	81.3	-38.7	9414.6	0.479	0.0	0.0	0.0	0.000
				32	7405.6	38.5	-47.8	7405.6	0.377	0.0	0.0	0.0	0.000
				33	8490.1	41.6	55.7	8490.1	0.432	0.0	0.0	0.0	0.000
				34	6481.1	-1.3	46.6	6481.1	0.330	0.0	0.0	0.0	0.000
				35	9416.7	81.5	55.7	9416.7	0.479	0.0	0.0	0.0	0.000
				36	7407.7	38.7	46.6	7407.7	0.377	0.0	0.0	0.0	0.000

Verifiche combinazioni di carico statiche

Verifica in condizioni **drenate**

Dati terreno

Terreno	limi-argilloso sabbiosi mediamente addensati
---------	--

Angolo d'attrito φ	22.70 [°]
Coesione c	0.0 [kg/cm ²]
Coesione non drenata c_u	0.37 [kg/cm ²]
Carico addizionale di superficie q	3900.0 [kg/m ²]
Profondità D	2.20 [m]
Peso proprio terreno γ	1780.0 [kg/m ³]

Fattori parziale di sicurezza del terreno verifiche a scorrimento

$\gamma_{R,Scor}$	1.000
k_1 fattore riduzione di φ	1.000
k_2 fattore riduzione di c	1.000
k_3 fattore riduzione di c_u	1.000

Fattori parziale di sicurezza del terreno

$\gamma_{\varphi\varphi}$	1.000
γ_c	1.000
γ_{cu}	1.000

Fattori parziale di sicurezza

Verifica di capacità portante	2.300
Verifica a scorrimento	1.100

Fattori di correzione dinamici per combinazioni statiche

z_c	1.000
z_q	1.000
z_g	1.000

Verifiche

Legenda	
B_{eq}	Base del plinto equivalente
H_{eq}	Altezza del plinto equivalente
$H_{Trasporto}$	Quota azioni esterne rispetto alla sezione di verifica
Comb.	Combinazione di carico
N	Azione verticale
M_x	Momento flettente M_x
M_y	Momento flettente M_y
Q_{Ed}	Carico verticale di progetto
$Q_{Rd,T}$	Capacità portante Terzaghi
$Q_{Rd,M}$	Capacità portante Mejerhoff
$Q_{Rd,EC7}$	Capacità portante EuroCodice 7
$Q_{Rd,V}$	Capacità portante Vesic
$Q_{Rd,T,PP}$	Capacità portante Terzaghi con correzione Paolucci-Pecker
$Q_{Rd,M,PP}$	Capacità portante Mejerhoff con correzione Paolucci-Pecker
$Q_{Rd,EC7,PP}$	Capacità portante EuroCodice 7 con correzione Paolucci-Pecker
$Q_{Rd,V,PP}$	Capacità portante Vesic con correzione Paolucci-Pecker
$Q_{Rd,T,MN,CI}$	Capacità portante Terzaghi con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,M,MN,CI}$	Capacità portante Mejerhoff con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,EC7,MN,CI}$	Capacità portante EuroCodice 7 con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,V,MN,CI}$	Capacità portante Vesic con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,T,MN,C}$	Capacità portante Terzaghi con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,M,MN,C}$	Capacità portante Mejerhoff con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,EC7,MN,C}$	Capacità portante EuroCodice 7 con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,V,MN,C}$	Capacità portante Vesic con correzione Maugeri-Novità con effetto cinematico
F_x	Azione di scorrimento F_x
F_y	Azione di scorrimento F_y
$H_{Ed,d} = \sqrt{F_x^2 + F_y^2}$	Azione di scorrimento totale $H_{Ed} = \sqrt{F_x^2 + F_y^2}$

H _{Rd}	Resistenza allo scorrimento
-----------------	-----------------------------

Elemento	B _{Eq} [m]	H _{Eq} [m]	H _{Trasporto} [m]	Comb.	N [kg]	M _x [kgm]	M _y [kgm]	Q _{Ed} [kg]	(S/R) _r	F _x [kg]	F _y [kg]	H _{Ed} [kg]	(S/R) _{scor}
1	4.60	4.60	1.90	1	175747.3	3258.1	-11068.1	175747.3	0.307	-1397.5	1672.7	2179.6	0.033
				2	175709.2	11457.8	-3265.3	175709.2	0.307	1640.6	-1337.5	2116.8	0.032
				3	176408.0	3238.7	4522.5	176408.0	0.308	4679.0	1672.4	4968.9	0.074
				4	176446.1	-4961.0	-3280.3	176446.1	0.308	1640.9	4682.6	4961.8	0.074
				5	180607.0	3110.5	-8127.2	180607.0	0.315	-178.9	1670.0	1679.6	0.024
				6	180584.1	8030.3	-3445.5	180584.1	0.315	1644.0	-136.1	1649.6	0.024
				7	181003.4	3098.9	1227.2	181003.4	0.316	3467.0	1669.8	3848.2	0.056
				8	181026.2	-1820.9	-3454.5	181026.2	0.316	1644.1	3476.0	3845.2	0.056
				9	179661.4	3139.3	-8091.7	179661.4	0.314	-179.5	1670.6	1680.2	0.025
				10	179638.6	8059.1	-3410.0	179638.6	0.314	1643.3	-135.6	1648.9	0.024
				11	180057.9	3127.6	1262.7	180057.9	0.314	3466.4	1670.3	3847.8	0.056
				12	180080.7	-1792.2	-3419.0	180080.7	0.314	1643.5	3476.5	3845.4	0.056
2	4.60	4.60	1.90	1	218473.8	-4044.2	-4150.4	218473.8	0.381	-565.2	3093.5	3144.7	0.038
				2	217768.1	23002.5	-1342.0	217768.1	0.380	22.3	-4429.0	4429.0	0.053
				3	218190.7	-4036.6	1452.4	218190.7	0.381	610.0	3093.6	3153.2	0.038
				4	218896.4	-31083.3	-1356.0	218896.4	0.382	22.5	10616.0	10616.0	0.128
				5	227741.4	-4309.6	-3186.9	227741.4	0.398	-327.3	3088.6	3105.9	0.036
				6	227318.0	11918.4	-1501.8	227318.0	0.397	25.2	-1424.9	1425.1	0.016
				7	227571.5	-4305.0	174.8	227571.5	0.397	377.9	3088.7	3111.7	0.036
				8	227994.9	-20533.0	-1510.2	227994.9	0.398	25.4	7602.1	7602.2	0.088
				9	225876.6	-4256.2	-3155.5	225876.6	0.394	-327.9	3089.6	3106.9	0.036
				10	225453.1	11971.8	-1470.4	225453.1	0.394	24.6	-1423.9	1424.1	0.017
				11	225706.7	-4251.6	206.2	225706.7	0.394	377.3	3089.7	3112.6	0.036
				12	226130.1	-20479.6	-1478.8	226130.1	0.395	24.8	7603.1	7603.2	0.088
3	4.60	4.60	1.90	1	218755.8	-4180.0	-3028.7	218755.8	0.382	-583.7	3104.7	3159.1	0.038
				2	218186.4	23378.0	70.3	218186.4	0.381	-2.1	-4417.8	4417.8	0.053
				3	218770.8	-4180.3	3169.2	218770.8	0.382	579.6	3104.7	3158.3	0.038
				4	219340.3	-31738.2	70.3	219340.3	0.383	-2.1	10627.2	10627.2	0.127
				5	228135.4	-4450.1	-1780.5	228135.4	0.398	-351.2	3099.8	3119.6	0.036
				6	227793.8	12084.7	78.9	227793.8	0.398	-2.2	-1413.7	1413.7	0.016
				7	228144.4	-4450.3	1938.3	228144.4	0.398	346.8	3099.8	3119.1	0.036
				8	228486.1	-20985.1	78.9	228486.1	0.399	-2.2	7613.3	7613.3	0.088
				9	226260.1	-4396.1	-1782.2	226260.1	0.395	-351.2	3100.7	3120.6	0.036
				10	225918.5	12138.7	77.2	225918.5	0.394	-2.2	-1412.8	1412.8	0.016
				11	226269.1	-4396.3	1936.5	226269.1	0.395	346.8	3100.7	3120.1	0.036
				12	226610.8	-20931.0	77.2	226610.8	0.396	-2.2	7614.2	7614.2	0.088
4	4.60	4.60	1.90	1	218770.8	-4180.3	-3169.2	218770.8	0.382	-579.6	3104.7	3158.3	0.038
				2	218186.4	23378.0	-70.3	218186.4	0.381	2.1	-4417.8	4417.8	0.053
				3	218755.8	-4180.0	3028.7	218755.8	0.382	583.7	3104.7	3159.1	0.038
				4	219340.3	-31738.2	-70.3	219340.3	0.383	2.1	10627.2	10627.2	0.127
				5	228144.4	-4450.3	-1938.3	228144.4	0.398	-346.8	3099.8	3119.1	0.036
				6	227793.8	12084.7	-78.9	227793.8	0.398	2.2	-1413.7	1413.7	0.016
				7	228135.5	-4450.1	1780.5	228135.5	0.398	351.2	3099.8	3119.6	0.036
				8	228486.1	-20985.1	-78.9	228486.1	0.399	2.2	7613.3	7613.3	0.088
				9	226269.1	-4396.3	-1936.5	226269.1	0.395	-346.8	3100.7	3120.1	0.036
				10	225918.5	12138.7	-77.2	225918.5	0.394	2.2	-1412.8	1412.8	0.016
				11	226260.1	-4396.1	1782.2	226260.1	0.395	351.2	3100.7	3120.6	0.036
				12	226610.8	-20931.0	-77.2	226610.8	0.396	2.2	7614.2	7614.2	0.088
5	4.60	4.60	1.90	1	218190.7	-4036.6	-1452.4	218190.7	0.381	-610.0	3093.6	3153.2	0.038
				2	217768.1	23002.5	1342.0	217768.1	0.380	-22.3	-4429.0	4429.0	0.053
				3	218473.8	-4044.2	4150.4	218473.8	0.381	565.2	3093.5	3144.7	0.038
				4	218896.4	-31083.3	1356.0	218896.4	0.382	-22.5	10616.0	10616.0	0.128
				5	227571.5	-4305.0	-174.8	227571.5	0.397	-377.9	3088.7	3111.7	0.036
				6	227318.0	11918.4	1501.8	227318.0	0.397	-25.2	-1424.9	1425.1	0.016
				7	227741.4	-4309.6	3186.9	227741.4	0.398	327.3	3088.6	3105.9	0.036

				8	227994.9	-20533.0	1510.2	227994.9	0.398	-25.4	7602.1	7602.2	0.088
				9	225706.7	-4251.6	-206.2	225706.7	0.394	-377.3	3089.7	3112.6	0.036
				10	225453.1	11971.8	1470.4	225453.1	0.394	-24.6	-1423.9	1424.1	0.017
				11	225876.6	-4256.2	3155.5	225876.6	0.394	327.9	3089.6	3106.9	0.036
				12	226130.1	-20479.6	1478.8	226130.1	0.395	-24.8	7603.1	7603.2	0.088
6	4.60	4.60	1.90	1	176408.0	3238.7	-4522.5	176408.0	0.308	-4679.0	1672.4	4968.9	0.074
				2	175709.2	11457.8	3265.3	175709.2	0.307	-1640.6	-1337.5	2116.8	0.032
				3	175747.2	3258.1	11068.1	175747.2	0.307	1397.5	1672.7	2179.6	0.033
				4	176446.0	-4961.0	3280.3	176446.0	0.308	-1640.9	4682.6	4961.8	0.074
				5	181003.4	3098.9	-1227.2	181003.4	0.316	-3467.0	1669.8	3848.2	0.056
				6	180584.1	8030.3	3445.5	180584.1	0.315	-1644.0	-136.1	1649.6	0.024
				7	180606.9	3110.5	8127.2	180606.9	0.315	178.9	1670.0	1679.6	0.024
				8	181026.2	-1820.9	3454.5	181026.2	0.316	-1644.1	3476.0	3845.2	0.056
				9	180057.9	3127.6	-1262.7	180057.9	0.314	-3466.4	1670.3	3847.8	0.056
				10	179638.6	8059.1	3410.0	179638.6	0.314	-1643.3	-135.6	1648.9	0.024
				11	179661.4	3139.3	8091.7	179661.4	0.314	179.5	1670.6	1680.2	0.025
				12	180080.7	-1792.2	3419.0	180080.7	0.314	-1643.5	3476.5	3845.4	0.056
7	3.50	3.50	1.90	1	101824.7	-2446.5	-26383.4	101824.7	0.338	-6566.2	-134.3	6567.6	0.170
				2	101309.4	-453.1	-141.2	101309.4	0.336	0.0	-885.8	885.8	0.023
				3	101828.9	-2457.7	26100.9	101828.9	0.338	6566.3	-134.9	6567.6	0.170
				4	102344.1	-4451.1	-141.3	102344.1	0.339	0.0	616.6	616.6	0.016
				5	101855.9	-2528.2	-15889.1	101855.9	0.338	-3939.7	-138.8	3942.2	0.102
				6	101546.8	-1332.2	-143.8	101546.8	0.337	0.0	-589.7	589.7	0.015
				7	101858.5	-2534.9	15601.5	101858.5	0.338	3939.8	-139.1	3942.2	0.102
				8	102167.6	-3731.0	-143.9	102167.6	0.339	0.0	311.8	311.8	0.008
				9	101849.8	-2512.3	-15888.6	101849.8	0.338	-3939.7	-137.9	3942.2	0.102
				10	101540.7	-1316.3	-143.3	101540.7	0.337	0.0	-588.8	588.8	0.015
				11	101852.4	-2519.0	15602.0	101852.4	0.338	3939.8	-138.3	3942.2	0.102
				12	102161.5	-3715.1	-143.4	102161.5	0.339	0.0	312.6	312.6	0.008
8	3.50	3.50	1.90	1	101828.9	-2457.7	-26100.9	101828.9	0.338	-6566.3	-134.9	6567.6	0.170
				2	101309.4	-453.1	141.2	101309.4	0.336	-0.0	-885.8	885.8	0.023
				3	101824.7	-2446.5	26383.4	101824.7	0.338	6566.3	-134.3	6567.6	0.170
				4	102344.1	-4451.1	141.3	102344.1	0.339	-0.0	616.6	616.6	0.016
				5	101858.5	-2534.9	-15601.5	101858.5	0.338	-3939.8	-139.1	3942.2	0.102
				6	101546.8	-1332.2	143.8	101546.8	0.337	-0.0	-589.7	589.7	0.015
				7	101855.9	-2528.2	15889.2	101855.9	0.338	3939.8	-138.8	3942.2	0.102
				8	102167.6	-3731.0	143.9	102167.6	0.339	-0.0	311.8	311.8	0.008
				9	101852.4	-2519.0	-15602.0	101852.4	0.338	-3939.8	-138.3	3942.2	0.102
				10	101540.7	-1316.3	143.3	101540.7	0.337	-0.0	-588.8	588.8	0.015
				11	101849.8	-2512.3	15888.6	101849.8	0.338	3939.8	-137.9	3942.2	0.102
				12	102161.5	-3715.1	143.4	102161.5	0.339	-0.0	312.6	312.6	0.008
9	3.50	3.50	1.90	1	101824.7	2446.6	-26383.6	101824.7	0.338	-6566.2	134.3	6567.6	0.170
				2	102344.2	4451.2	-141.5	102344.2	0.339	0.0	-616.6	616.6	0.016
				3	101829.0	2457.7	26100.8	101829.0	0.338	6566.3	134.9	6567.6	0.170
				4	101309.5	453.1	-141.3	101309.5	0.336	0.0	885.8	885.8	0.023
				5	101855.9	2528.3	-15889.3	101855.9	0.338	-3939.7	138.8	3942.2	0.102
				6	102167.6	3731.1	-144.1	102167.6	0.339	0.0	-311.8	311.8	0.008
				7	101858.5	2535.0	15601.3	101858.5	0.338	3939.8	139.1	3942.2	0.102
				8	101546.8	1332.2	-143.9	101546.8	0.337	0.0	589.7	589.7	0.015
				9	101849.8	2512.4	-15888.8	101849.8	0.338	-3939.7	137.9	3942.2	0.102
				10	102161.5	3715.2	-143.5	102161.5	0.339	0.0	-312.6	312.6	0.008
				11	101852.4	2519.1	15601.8	101852.4	0.338	3939.8	138.3	3942.2	0.102
				12	101540.7	1316.3	-143.4	101540.7	0.337	0.0	588.8	588.8	0.015
10	3.50	3.50	1.90	1	101829.0	2457.7	-26100.8	101829.0	0.338	-6566.3	134.9	6567.6	0.170
				2	102344.2	4451.2	141.5	102344.2	0.339	-0.0	-616.6	616.6	0.016
				3	101824.7	2446.6	26383.6	101824.7	0.338	6566.3	134.3	6567.6	0.170
				4	101309.5	453.1	141.3	101309.5	0.336	-0.0	885.8	885.8	0.023
				5	101858.5	2535.0	-15601.3	101858.5	0.338	-3939.8	139.1	3942.2	0.102
				6	102167.6	3731.1	144.1	102167.6	0.339	-0.0	-311.8	311.8	0.008
				7	101855.9	2528.3	15889.3	101855.9	0.338	3939.8	138.8	3942.2	0.102

				8	101546.8	1332.2	143.9	101546.8	0.337	-0.0	589.7	589.7	0.015
				9	101852.4	2519.1	-15601.8	101852.4	0.338	-3939.8	138.3	3942.2	0.102
				10	102161.5	3715.2	143.5	102161.5	0.339	-0.0	-312.6	312.6	0.008
				11	101849.8	2512.4	15888.8	101849.8	0.338	3939.8	137.9	3942.2	0.102
				12	101540.7	1316.3	143.4	101540.7	0.337	-0.0	588.8	588.8	0.015
11	4.60	4.60	1.90	1	175750.3	-3257.8	-11080.7	175750.3	0.307	-1397.2	-1672.7	2179.5	0.033
				2	176449.1	4961.3	-3292.9	176449.1	0.308	1641.2	-4682.6	4961.9	0.074
				3	176411.0	-3238.4	4509.9	176411.0	0.308	4679.3	-1672.4	4969.1	0.074
				4	175712.2	-11457.5	-3277.9	175712.2	0.307	1640.9	1337.5	2116.9	0.032
				5	180610.0	-3110.3	-8139.8	180610.0	0.315	-178.7	-1670.0	1679.6	0.024
				6	181029.3	1821.2	-3467.1	181029.3	0.316	1644.4	-3476.0	3845.3	0.056
				7	181006.4	-3098.6	1214.6	181006.4	0.316	3467.2	-1669.8	3848.4	0.056
				8	180587.1	-8030.1	-3458.1	180587.1	0.315	1644.2	136.1	1649.8	0.024
				9	179664.4	-3139.0	-8104.3	179664.4	0.314	-179.3	-1670.6	1680.1	0.025
				10	180083.7	1792.5	-3431.6	180083.7	0.314	1643.7	-3476.5	3845.5	0.056
				11	180060.9	-3127.3	1250.1	180060.9	0.314	3466.6	-1670.3	3848.0	0.056
				12	179641.6	-8058.8	-3422.6	179641.6	0.314	1643.6	135.6	1649.1	0.024
12	4.60	4.60	1.90	1	218825.1	4055.5	-4173.8	218825.1	0.382	-564.8	-3093.5	3144.6	0.038
				2	219247.7	31094.5	-1379.4	219247.7	0.383	23.0	-10616.0	10616.0	0.127
				3	218541.9	4047.8	1429.0	218541.9	0.381	610.5	-3093.6	3153.3	0.038
				4	218119.4	-22991.2	-1365.4	218119.4	0.381	22.7	4429.0	4429.0	0.053
				5	228092.7	4320.8	-3210.3	228092.7	0.398	-326.9	-3088.6	3105.9	0.036
				6	228346.2	20544.3	-1533.6	228346.2	0.399	25.8	-7602.1	7602.2	0.088
				7	227922.8	4316.2	151.4	227922.8	0.398	378.3	-3088.7	3111.8	0.036
				8	227669.2	-11907.2	-1525.2	227669.2	0.397	25.6	1424.9	1425.1	0.016
				9	226227.8	4267.5	-3178.9	226227.8	0.395	-327.4	-3089.6	3106.9	0.036
				10	226481.3	20490.9	-1502.2	226481.3	0.395	25.2	-7603.1	7603.2	0.088
				11	226057.9	4262.9	182.8	226057.9	0.395	377.7	-3089.7	3112.7	0.036
				12	225804.4	-11960.6	-1493.8	225804.4	0.394	25.1	1423.9	1424.1	0.017
13	4.60	4.60	1.90	1	219455.3	4202.2	-3040.4	219455.3	0.383	-583.5	-3104.7	3159.0	0.038
				2	220039.7	31760.4	58.5	220039.7	0.384	-1.8	-10627.2	10627.2	0.127
				3	219470.2	4202.5	3157.5	219470.2	0.383	579.8	-3104.7	3158.3	0.038
				4	218885.8	-23355.8	58.6	218885.8	0.382	-1.8	4417.8	4417.8	0.053
				5	228834.9	4472.3	-1792.2	228834.9	0.399	-351.0	-3099.8	3119.6	0.036
				6	229185.5	21007.3	67.1	229185.5	0.400	-2.0	-7613.3	7613.3	0.087
				7	228843.8	4472.5	1926.5	228843.8	0.399	347.0	-3099.8	3119.1	0.036
				8	228493.2	-12062.5	67.2	228493.2	0.399	-2.0	1413.7	1413.7	0.016
				9	226959.5	4418.3	-1793.9	226959.5	0.396	-351.0	-3100.7	3120.5	0.036
				10	227310.2	20953.3	65.4	227310.2	0.397	-2.0	-7614.2	7614.2	0.088
				11	226968.5	4418.5	1924.8	226968.5	0.396	347.0	-3100.7	3120.1	0.036
				12	226617.9	-12116.5	65.4	226617.9	0.396	-2.0	1412.8	1412.8	0.016
14	4.60	4.60	1.90	1	219470.3	4202.5	-3157.5	219470.3	0.383	-579.8	-3104.7	3158.3	0.038
				2	220039.7	31760.4	-58.5	220039.7	0.384	1.8	-10627.2	10627.2	0.127
				3	219455.3	4202.2	3040.4	219455.3	0.383	583.5	-3104.7	3159.0	0.038
				4	218885.8	-23355.8	-58.6	218885.8	0.382	1.8	4417.8	4417.8	0.053
				5	228843.8	4472.5	-1926.5	228843.8	0.399	-347.0	-3099.8	3119.1	0.036
				6	229185.5	21007.3	-67.1	229185.5	0.400	2.0	-7613.3	7613.3	0.087
				7	228834.9	4472.3	1792.2	228834.9	0.399	351.0	-3099.8	3119.6	0.036
				8	228493.2	-12062.5	-67.2	228493.2	0.399	2.0	1413.7	1413.7	0.016
				9	226968.5	4418.5	-1924.8	226968.5	0.396	-347.0	-3100.7	3120.1	0.036
				10	227310.2	20953.3	-65.4	227310.2	0.397	2.0	-7614.2	7614.2	0.088
				11	226959.6	4418.3	1793.9	226959.6	0.396	351.0	-3100.7	3120.5	0.036
				12	226617.9	-12116.5	-65.4	226617.9	0.396	2.0	1412.8	1412.8	0.016
15	4.60	4.60	1.90	1	218541.9	4047.8	-1429.0	218541.9	0.381	-610.5	-3093.6	3153.3	0.038
				2	219247.6	31094.5	1379.4	219247.6	0.383	-23.0	-10616.0	10616.0	0.127
				3	218825.1	4055.5	4173.8	218825.1	0.382	564.8	-3093.5	3144.6	0.038
				4	218119.4	-22991.2	1365.4	218119.4	0.381	-22.7	4429.0	4429.0	0.053
				5	227922.8	4316.2	-151.4	227922.8	0.398	-378.3	-3088.7	3111.8	0.036
				6	228346.2	20544.3	1533.6	228346.2	0.399	-25.8	-7602.1	7602.2	0.088
				7	228092.7	4320.8	3210.3	228092.7	0.398	326.9	-3088.6	3105.9	0.036

				8	227669.2	-11907.2	1525.2	227669.2	0.397	-25.6	1424.9	1425.1	0.016
				9	226057.9	4262.9	-182.8	226057.9	0.395	-377.7	-3089.7	3112.7	0.036
				10	226481.3	20490.9	1502.2	226481.3	0.395	-25.2	-7603.1	7603.2	0.088
				11	226227.8	4267.4	3178.9	226227.8	0.395	327.4	-3089.6	3106.9	0.036
				12	225804.4	-11960.6	1493.8	225804.4	0.394	-25.1	1423.9	1424.1	0.017
16	4.60	4.60	1.90	1	176411.0	-3238.4	-4509.9	176411.0	0.308	-4679.3	-1672.4	4969.1	0.074
				2	176449.1	4961.3	3292.9	176449.1	0.308	-1641.2	-4682.6	4961.9	0.074
				3	175750.3	-3257.9	11080.7	175750.3	0.307	1397.2	-1672.7	2179.5	0.033
				4	175712.2	-11457.5	3277.9	175712.2	0.307	-1640.9	1337.5	2116.9	0.032
				5	181006.4	-3098.6	-1214.6	181006.4	0.316	-3467.2	-1669.8	3848.4	0.056
				6	181029.2	1821.2	3467.1	181029.2	0.316	-1644.4	-3476.0	3845.3	0.056
				7	180610.0	-3110.3	8139.8	180610.0	0.315	178.7	-1670.0	1679.6	0.024
				8	180587.1	-8030.1	3458.1	180587.1	0.315	-1644.2	136.1	1649.8	0.024
				9	180060.9	-3127.3	-1250.1	180060.9	0.314	-3466.6	-1670.3	3848.0	0.056
				10	180083.7	1792.5	3431.6	180083.7	0.314	-1643.7	-3476.5	3845.5	0.056
				11	179664.4	-3139.0	8104.3	179664.4	0.314	179.3	-1670.5	1680.1	0.025
				12	179641.6	-8058.8	3422.6	179641.6	0.314	-1643.6	135.6	1649.1	0.024
17	1.20	1.20	0.40	1	10372.5	-53.0	-15.6	10372.5	0.370	0.0	0.0	0.0	0.000
				2	11098.0	-83.0	-5.1	11098.0	0.396	0.0	0.0	0.0	0.000
				3	10370.9	-52.8	5.4	10370.9	0.370	0.0	0.0	0.0	0.000
				4	9645.5	-22.8	-5.1	9645.5	0.344	0.0	0.0	0.0	0.000
				5	10426.3	-60.2	-12.0	10426.3	0.372	0.0	0.0	0.0	0.000
				6	10861.6	-78.1	-5.7	10861.6	0.387	0.0	0.0	0.0	0.000
				7	10425.3	-60.0	0.6	10425.3	0.372	0.0	0.0	0.0	0.000
				8	9990.1	-42.1	-5.7	9990.1	0.356	0.0	0.0	0.0	0.000
				9	10415.5	-58.7	-11.8	10415.5	0.371	0.0	0.0	0.0	0.000
				10	10850.8	-76.7	-5.5	10850.8	0.387	0.0	0.0	0.0	0.000
				11	10414.5	-58.6	0.7	10414.5	0.371	0.0	0.0	0.0	0.000
				12	9979.3	-40.6	-5.6	9979.3	0.356	0.0	0.0	0.0	0.000
18	1.20	1.20	0.40	1	10370.6	-53.1	-11.3	10370.6	0.370	0.0	0.0	0.0	0.000
				2	11110.7	-83.7	0.2	11110.7	0.396	0.0	0.0	0.0	0.000
				3	10370.6	-53.1	11.8	10370.6	0.370	0.0	0.0	0.0	0.000
				4	9630.5	-22.4	0.2	9630.5	0.343	0.0	0.0	0.0	0.000
				5	10425.0	-60.3	-6.7	10425.0	0.372	0.0	0.0	0.0	0.000
				6	10869.0	-78.7	0.3	10869.0	0.388	0.0	0.0	0.0	0.000
				7	10425.0	-60.4	7.2	10425.0	0.372	0.0	0.0	0.0	0.000
				8	9980.9	-42.0	0.3	9980.9	0.356	0.0	0.0	0.0	0.000
				9	10414.1	-58.9	-6.7	10414.1	0.371	0.0	0.0	0.0	0.000
				10	10858.2	-77.3	0.3	10858.2	0.387	0.0	0.0	0.0	0.000
				11	10414.1	-58.9	7.2	10414.1	0.371	0.0	0.0	0.0	0.000
				12	9970.1	-40.5	0.3	9970.1	0.355	0.0	0.0	0.0	0.000
19	1.20	1.20	0.40	1	10370.6	-53.1	-11.8	10370.6	0.370	0.0	0.0	0.0	0.000
				2	11110.7	-83.7	-0.2	11110.7	0.396	0.0	0.0	0.0	0.000
				3	10370.6	-53.1	11.3	10370.6	0.370	0.0	0.0	0.0	0.000
				4	9630.5	-22.4	-0.2	9630.5	0.343	0.0	0.0	0.0	0.000
				5	10425.0	-60.4	-7.2	10425.0	0.372	0.0	0.0	0.0	0.000
				6	10869.0	-78.7	-0.3	10869.0	0.388	0.0	0.0	0.0	0.000
				7	10425.0	-60.3	6.7	10425.0	0.372	0.0	0.0	0.0	0.000
				8	9980.9	-42.0	-0.3	9980.9	0.356	0.0	0.0	0.0	0.000
				9	10414.1	-58.9	-7.2	10414.1	0.371	0.0	0.0	0.0	0.000
				10	10858.2	-77.3	-0.3	10858.2	0.387	0.0	0.0	0.0	0.000
				11	10414.1	-58.9	6.7	10414.1	0.371	0.0	0.0	0.0	0.000
				12	9970.1	-40.5	-0.3	9970.1	0.355	0.0	0.0	0.0	0.000
20	1.20	1.20	0.40	1	10370.9	-52.8	-5.4	10370.9	0.370	0.0	0.0	0.0	0.000
				2	11098.0	-83.0	5.1	11098.0	0.396	0.0	0.0	0.0	0.000
				3	10372.5	-53.0	15.6	10372.5	0.370	0.0	0.0	0.0	0.000
				4	9645.5	-22.8	5.1	9645.5	0.344	0.0	0.0	0.0	0.000
				5	10425.3	-60.0	-0.6	10425.3	0.372	0.0	0.0	0.0	0.000
				6	10861.6	-78.1	5.7	10861.6	0.387	0.0	0.0	0.0	0.000
				7	10426.3	-60.2	12.0	10426.3	0.372	0.0	0.0	0.0	0.000

				8	9990.1	-42.1	5.7	9990.1	0.356	0.0	0.0	0.0	0.000
				9	10414.5	-58.6	-0.7	10414.5	0.371	0.0	0.0	0.0	0.000
				10	10850.8	-76.7	5.5	10850.8	0.387	0.0	0.0	0.0	0.000
				11	10415.5	-58.7	11.8	10415.5	0.371	0.0	0.0	0.0	0.000
				12	9979.3	-40.6	5.6	9979.3	0.356	0.0	0.0	0.0	0.000
21	1.20	1.20	0.40	1	10376.3	53.2	-15.6	10376.3	0.370	0.0	0.0	0.0	0.000
				2	9649.2	23.0	-5.1	9649.2	0.344	0.0	0.0	0.0	0.000
				3	10374.7	53.0	5.4	10374.7	0.370	0.0	0.0	0.0	0.000
				4	11101.7	83.2	-5.1	11101.7	0.396	0.0	0.0	0.0	0.000
				5	10430.1	60.4	-12.0	10430.1	0.372	0.0	0.0	0.0	0.000
				6	9993.8	42.3	-5.7	9993.8	0.356	0.0	0.0	0.0	0.000
				7	10429.1	60.2	0.6	10429.1	0.372	0.0	0.0	0.0	0.000
				8	10865.4	78.4	-5.7	10865.4	0.387	0.0	0.0	0.0	0.000
				9	10419.3	58.9	-11.9	10419.3	0.371	0.0	0.0	0.0	0.000
				10	9983.0	40.8	-5.6	9983.0	0.356	0.0	0.0	0.0	0.000
				11	10418.3	58.8	0.7	10418.3	0.371	0.0	0.0	0.0	0.000
				12	10854.5	76.9	-5.6	10854.5	0.387	0.0	0.0	0.0	0.000
22	1.20	1.20	0.40	1	10378.1	53.5	-11.4	10378.1	0.370	0.0	0.0	0.0	0.000
				2	9638.0	22.9	0.2	9638.0	0.344	0.0	0.0	0.0	0.000
				3	10378.2	53.5	11.8	10378.2	0.370	0.0	0.0	0.0	0.000
				4	11118.2	84.2	0.2	11118.2	0.396	0.0	0.0	0.0	0.000
				5	10432.5	60.8	-6.7	10432.5	0.372	0.0	0.0	0.0	0.000
				6	9988.5	42.4	0.3	9988.5	0.356	0.0	0.0	0.0	0.000
				7	10432.5	60.8	7.2	10432.5	0.372	0.0	0.0	0.0	0.000
				8	10876.5	79.2	0.3	10876.5	0.388	0.0	0.0	0.0	0.000
				9	10421.6	59.3	-6.7	10421.6	0.372	0.0	0.0	0.0	0.000
				10	9977.6	40.9	0.3	9977.6	0.356	0.0	0.0	0.0	0.000
				11	10421.6	59.3	7.2	10421.6	0.372	0.0	0.0	0.0	0.000
				12	10865.7	77.7	0.3	10865.7	0.387	0.0	0.0	0.0	0.000
23	1.20	1.20	0.40	1	10378.2	53.5	-11.8	10378.2	0.370	0.0	0.0	0.0	0.000
				2	9638.0	22.9	-0.2	9638.0	0.344	0.0	0.0	0.0	0.000
				3	10378.1	53.5	11.4	10378.1	0.370	0.0	0.0	0.0	0.000
				4	11118.2	84.2	-0.2	11118.2	0.396	0.0	0.0	0.0	0.000
				5	10432.5	60.8	-7.2	10432.5	0.372	0.0	0.0	0.0	0.000
				6	9988.5	42.4	-0.3	9988.5	0.356	0.0	0.0	0.0	0.000
				7	10432.5	60.8	6.7	10432.5	0.372	0.0	0.0	0.0	0.000
				8	10876.5	79.2	-0.3	10876.5	0.388	0.0	0.0	0.0	0.000
				9	10421.6	59.3	-7.2	10421.6	0.372	0.0	0.0	0.0	0.000
				10	9977.6	40.9	-0.3	9977.6	0.356	0.0	0.0	0.0	0.000
				11	10421.6	59.3	6.7	10421.6	0.372	0.0	0.0	0.0	0.000
				12	10865.7	77.7	-0.3	10865.7	0.387	0.0	0.0	0.0	0.000
24	1.20	1.20	0.40	1	10374.7	53.0	-5.4	10374.7	0.370	0.0	0.0	0.0	0.000
				2	9649.2	23.0	5.1	9649.2	0.344	0.0	0.0	0.0	0.000
				3	10376.3	53.2	15.6	10376.3	0.370	0.0	0.0	0.0	0.000
				4	11101.7	83.2	5.1	11101.7	0.396	0.0	0.0	0.0	0.000
				5	10429.1	60.2	-0.6	10429.1	0.372	0.0	0.0	0.0	0.000
				6	9993.8	42.3	5.7	9993.8	0.356	0.0	0.0	0.0	0.000
				7	10430.1	60.4	12.0	10430.1	0.372	0.0	0.0	0.0	0.000
				8	10865.4	78.4	5.7	10865.4	0.387	0.0	0.0	0.0	0.000
				9	10418.3	58.8	-0.7	10418.3	0.371	0.0	0.0	0.0	0.000
				10	9983.0	40.8	5.6	9983.0	0.356	0.0	0.0	0.0	0.000
				11	10419.3	58.9	11.9	10419.3	0.371	0.0	0.0	0.0	0.000
				12	10854.5	76.9	5.6	10854.5	0.387	0.0	0.0	0.0	0.000

Verifiche combinazioni di carico dinamiche

Verifica in condizioni **drenate**

Dati terreno

Terreno	limi-argilloso sabbiosi mediamente addensati
---------	--

Angolo d'attrito φ	22.70 [°]
Coesione c	0.0 [kg/cm ²]
Coesione non drenata c_u	0.37 [kg/cm ²]
Carico addizionale di superficie q	3900.0 [kg/m ²]
Profondità D	2.20 [m]
Peso proprio terreno γ	1780.0 [kg/m ³]

Fattori parziale di sicurezza del terreno verifiche a scorrimento

$\gamma_{R,Scor}$	1.000
k_1 fattore riduzione di φ	1.000
k_2 fattore riduzione di c	1.000
k_3 fattore riduzione di c_u	1.000

Fattori parziale di sicurezza del terreno

$\gamma_{\varphi\varphi}$	1.000
γ_c	1.000
γ_{cu}	1.000

Fattori parziale di sicurezza

Verifica di capacità portante	2.300
Verifica a scorrimento	1.100

Fattori di correzione dinamici per combinazioni statiche

z_c	1.000
z_q	1.000
z_g	1.000

Verifiche

Legenda	
B_{eq}	Base del plinto equivalente
H_{eq}	Altezza del plinto equivalente
$H_{Trasporto}$	Quota azioni esterne rispetto alla sezione di verifica
Comb.	Combinazione di carico
N	Azione verticale
M_x	Momento flettente M_x
M_y	Momento flettente M_y
Q_{Ed}	Carico verticale di progetto
$Q_{Rd,T}$	Capacità portante Terzaghi
$Q_{Rd,M}$	Capacità portante Mejerhoff
$Q_{Rd,EC7}$	Capacità portante EuroCodice 7
$Q_{Rd,V}$	Capacità portante Vesic
$Q_{Rd,T,PP}$	Capacità portante Terzaghi con correzione Paolucci-Pecker
$Q_{Rd,M,PP}$	Capacità portante Mejerhoff con correzione Paolucci-Pecker
$Q_{Rd,EC7,PP}$	Capacità portante EuroCodice 7 con correzione Paolucci-Pecker
$Q_{Rd,V,PP}$	Capacità portante Vesic con correzione Paolucci-Pecker
$Q_{Rd,T,MN,CI}$	Capacità portante Terzaghi con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,M,MN,CI}$	Capacità portante Mejerhoff con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,EC7,MN,CI}$	Capacità portante EuroCodice 7 con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,V,MN,CI}$	Capacità portante Vesic con correzione Maugeri-Novità con effetto cinematico+inerziale
$Q_{Rd,T,MN,C}$	Capacità portante Terzaghi con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,M,MN,C}$	Capacità portante Mejerhoff con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,EC7,MN,C}$	Capacità portante EuroCodice 7 con correzione Maugeri-Novità con effetto cinematico
$Q_{Rd,V,MN,C}$	Capacità portante Vesic con correzione Maugeri-Novità con effetto cinematico
F_x	Azione di scorrimento F_x
F_y	Azione di scorrimento F_y
$H_{Ed,d} = \sqrt{F_x^2 + F_y^2}$	Azione di scorrimento totale $H_{Ed} = \sqrt{F_x^2 + F_y^2}$

H _{Rd}	Resistenza allo scorrimento
-----------------	-----------------------------

Elemento	B _{Eq} [m]	H _{Eq} [m]	H _{Trasporto} [m]	Comb.	N [kg]	M _x [kgm]	M _y [kgm]	Q _{Ed} [kg]	(S/R) _{T,PP}	F _x [kg]	F _y [kg]	H _{Ed} [kg]	(S/R) _{Scor}
1	4.60	4.60	1.90	13	134904.2	14336.3	-55230.9	134904.2	0.248	-7772.8	-792.3	7813.0	0.152
				14	122504.1	14238.7	-54297.3	122504.1	0.227	-8030.8	-826.7	8073.2	0.173
				15	136263.3	-8285.0	-55163.4	136263.3	0.252	-7777.0	3748.6	8633.3	0.167
				16	123863.3	-8382.5	-54229.7	123863.3	0.231	-8035.0	3714.2	8851.9	0.188
				17	135524.4	40636.0	-18853.1	135524.4	0.246	-1264.8	-6120.7	6250.0	0.121
				18	123124.4	40538.5	-17919.5	123124.4	0.225	-1522.8	-6155.1	6340.7	0.135
				19	137414.4	40557.9	12395.5	137414.4	0.252	4309.2	-6147.0	7507.0	0.144
				20	125014.4	40460.3	13329.1	125014.4	0.230	4051.2	-6181.4	7390.6	0.155
				21	141204.2	14075.7	48931.0	141204.2	0.265	10807.1	-879.8	10842.9	0.202
				22	128804.1	13978.1	49864.6	128804.1	0.243	10549.1	-914.2	10588.6	0.216
				23	142563.4	-8545.6	48998.6	142563.4	0.268	10802.9	3661.0	11406.4	0.210
				24	130163.3	-8643.1	49932.2	130163.3	0.246	10544.8	3626.6	11151.1	0.225
				25	140055.0	-34768.1	-18627.8	140055.0	0.259	-1279.0	9015.5	9105.7	0.171
				26	127654.9	-34865.6	-17694.2	127654.9	0.238	-1537.0	8981.1	9111.7	0.188
				27	141945.0	-34846.2	12620.8	141945.0	0.264	4295.0	8989.2	9962.6	0.185
				28	129544.9	-34943.8	13554.4	129544.9	0.243	4037.0	8954.8	9822.7	0.199
				29	151576.8	14358.4	-19863.5	151576.8	0.266	-968.7	-782.9	1245.5	0.022
				30	110243.3	14033.2	-16751.4	110243.3	0.196	-1828.8	-897.6	2037.2	0.049
				31	152936.0	-8262.8	-19795.9	152936.0	0.273	-973.0	3757.9	3881.8	0.067
				32	111602.5	-8588.0	-16683.8	111602.5	0.201	-1833.0	3643.3	4078.4	0.096
				33	153466.8	14280.2	11385.1	153466.8	0.275	4605.3	-809.2	4675.8	0.080
				34	112133.3	13955.0	14497.2	112133.3	0.202	3745.2	-923.8	3857.4	0.090
				35	154826.0	-8341.0	11452.7	154826.0	0.279	4601.0	3731.7	5924.1	0.101
				36	113492.5	-8666.2	14564.8	113492.5	0.206	3740.9	3617.0	5203.6	0.121
2	4.60	4.60	1.90	13	169995.1	14254.2	-43313.2	169995.1	0.312	-9246.5	-379.4	9254.3	0.143
				14	154208.4	14965.5	-42584.7	154208.4	0.284	-9423.2	-55.4	9423.3	0.161
				15	170769.6	-21458.0	-43254.4	170769.6	0.315	-9249.7	5293.9	10657.5	0.164
				16	154983.0	-20746.7	-42525.9	154983.0	0.289	-9426.3	5617.9	10973.4	0.186
				17	168896.1	55924.1	-14062.8	168896.1	0.307	-2695.5	-6997.2	7498.4	0.117
				18	153109.5	56635.4	-13334.3	153109.5	0.279	-2872.1	-6673.1	7265.0	0.125
				19	168728.6	55928.9	11067.8	168728.6	0.306	2916.7	-6996.2	7579.8	0.118
				20	152942.0	56640.3	11796.3	152942.0	0.278	2740.1	-6672.2	7212.9	0.124
				21	169436.7	14270.4	40455.6	169436.7	0.311	9460.7	-376.1	9468.1	0.147
				22	153650.0	14981.7	41184.1	153650.0	0.283	9284.0	-52.1	9284.2	0.159
				23	170211.2	-21441.8	40514.5	170211.2	0.315	9457.5	5297.2	10840.0	0.167
				24	154424.6	-20730.5	41243.0	154424.6	0.287	9280.9	5621.2	10850.5	0.185
				25	171477.9	-63116.6	-13866.6	171477.9	0.320	-2705.9	11913.9	12217.4	0.187
				26	155691.2	-62405.2	-13138.1	155691.2	0.293	-2882.5	12238.0	12572.9	0.212
				27	171310.4	-63111.7	11264.0	171310.4	0.319	2906.2	11914.9	12264.3	0.188
				28	155523.7	-62400.4	11992.5	155523.7	0.293	2729.6	12239.0	12539.7	0.212
				29	188217.5	13429.9	-14844.1	188217.5	0.332	-2493.1	-756.3	2605.3	0.036
				30	135595.3	15801.1	-12415.7	135595.3	0.241	-3081.8	323.8	3098.8	0.060
				31	188992.0	-22282.2	-14785.3	188992.0	0.338	-2496.2	4917.0	5514.4	0.077
				32	136369.9	-19911.1	-12356.8	136369.9	0.249	-3084.9	5997.1	6744.0	0.130
				33	188050.0	13434.8	10286.5	188050.0	0.333	3119.1	-755.3	3209.2	0.045
				34	135427.8	15806.0	12715.0	135427.8	0.240	2530.4	324.8	2551.1	0.050
				35	188824.5	-22277.4	10345.4	188824.5	0.339	3115.9	4918.0	5822.0	0.081
				36	136202.4	-19906.2	12773.8	136202.4	0.248	2527.2	5998.1	6508.8	0.126
3	4.60	4.60	1.90	13	169827.5	14965.4	-42308.6	169827.5	0.311	-9343.0	-413.3	9352.2	0.145
				14	154213.5	15676.8	-42401.9	154213.5	0.284	-9320.8	-91.9	9321.2	0.159
				15	170612.9	-22378.4	-42316.9	170612.9	0.315	-9342.7	5353.7	10767.9	0.166
				16	154998.9	-21667.0	-42410.1	154998.9	0.289	-9320.5	5675.2	10912.3	0.185
				17	168978.5	58530.7	-12609.9	168978.5	0.307	-2812.3	-7141.9	7675.7	0.119
				18	153364.4	59242.1	-12703.2	153364.4	0.279	-2790.1	-6820.5	7369.1	0.126
				19	169036.0	58528.7	12837.9	169036.0	0.307	2785.9	-7142.3	7666.4	0.119

				20	153421.9	59240.1	12744.6	153421.9	0.280	2808.1	-6820.8	7376.2	0.126
				21	170019.3	14958.6	42517.5	170019.3	0.312	9317.5	-414.4	9326.7	0.144
				22	154405.2	15670.0	42424.2	154405.2	0.285	9339.8	-93.0	9340.2	0.159
				23	170804.7	-22385.1	42509.3	170804.7	0.316	9317.9	5352.6	10745.8	0.165
				24	155190.6	-21673.8	42416.0	155190.6	0.289	9340.1	5674.1	10928.5	0.185
				25	171596.5	-65948.5	-12637.3	171596.5	0.320	-2811.3	12081.6	12404.3	0.190
				26	155982.4	-65237.1	-12730.6	155982.4	0.294	-2789.0	12403.0	12712.7	0.214
				27	171654.0	-65950.5	12810.5	171654.0	0.320	2786.9	12081.2	12398.5	0.190
				28	156039.9	-65239.1	12717.2	156039.9	0.294	2809.1	12402.7	12716.8	0.214
				29	188111.2	14133.1	-12510.7	188111.2	0.333	-2837.9	-788.7	2945.4	0.041
				30	136064.3	16504.3	-12821.6	136064.3	0.242	-2763.8	282.7	2778.2	0.054
				31	188896.6	-23210.7	-12518.9	188896.6	0.339	-2837.6	4978.3	5730.2	0.080
				32	136849.7	-20839.5	-12829.9	136849.7	0.249	-2763.5	6049.8	6651.1	0.128
				33	188168.7	14131.0	12937.2	188168.7	0.333	2760.3	-789.1	2870.9	0.040
				34	136121.8	16502.3	12626.2	136121.8	0.242	2834.4	282.4	2848.4	0.055
				35	188954.1	-23212.7	12929.0	188954.1	0.339	2760.6	4978.0	5692.2	0.079
				36	136907.2	-20841.5	12618.0	136907.2	0.250	2834.7	6049.5	6680.7	0.128
4	4.60	4.60	1.90	13	170019.6	14958.6	-42517.4	170019.6	0.312	-9317.2	-414.4	9326.4	0.144
				14	154405.6	15670.0	-42424.0	154405.6	0.285	-9339.5	-93.0	9339.9	0.159
				15	170805.1	-22385.2	-42509.3	170805.1	0.316	-9317.5	5352.6	10745.5	0.165
				16	155191.0	-21673.8	-42416.0	155191.0	0.289	-9339.7	5674.1	10928.2	0.185
				17	169036.1	58528.7	-12837.6	169036.1	0.307	-2785.8	-7142.3	7666.3	0.119
				18	153422.0	59240.1	-12744.3	153422.0	0.280	-2808.1	-6820.8	7376.2	0.126
				19	168978.6	58530.8	12610.2	168978.6	0.307	2812.3	-7141.9	7675.7	0.119
				20	153364.5	59242.1	12703.5	153364.5	0.279	2790.1	-6820.5	7369.1	0.126
				21	169827.9	14965.4	42308.8	169827.9	0.311	9343.3	-413.3	9352.5	0.145
				22	154213.9	15676.7	42402.1	154213.9	0.284	9321.1	-91.9	9321.6	0.159
				23	170613.4	-22378.4	42316.8	170613.4	0.315	9343.1	5353.7	10768.2	0.166
				24	154999.3	-21667.0	42410.1	154999.3	0.289	9320.8	5675.1	10912.6	0.185
				25	171654.1	-65950.5	-12810.8	171654.1	0.320	-2786.7	12081.2	12398.5	0.190
				26	156040.1	-65239.2	-12717.5	156040.1	0.294	-2809.0	12402.7	12716.8	0.214
				27	171596.6	-65948.5	12637.0	171596.6	0.320	2811.4	12081.6	12404.4	0.190
				28	155982.5	-65237.1	12730.4	155982.5	0.294	2789.2	12403.0	12712.7	0.214
				29	188168.8	14131.1	-12937.1	188168.8	0.333	-2760.2	-789.1	2870.8	0.040
				30	136121.9	16502.2	-12626.0	136121.9	0.242	-2834.3	282.4	2848.4	0.055
				31	188954.3	-23212.7	-12929.1	188954.3	0.339	-2760.5	4978.0	5692.2	0.079
				32	136907.3	-20841.5	-12618.0	136907.3	0.250	-2834.6	6049.5	6680.6	0.128
				33	188111.3	14133.1	12510.7	188111.3	0.333	2838.0	-788.7	2945.5	0.041
				34	136064.4	16504.3	12821.8	136064.4	0.242	2763.8	282.7	2778.3	0.054
				35	188896.8	-23210.6	12518.8	188896.8	0.339	2837.7	4978.3	5730.3	0.080
				36	136849.8	-20839.5	12829.9	136849.8	0.249	2763.6	6049.8	6651.1	0.128
5	4.60	4.60	1.90	13	169436.9	14270.5	-40455.4	169436.9	0.311	-9460.3	-376.1	9467.8	0.147
				14	153650.3	14981.7	-41183.9	153650.3	0.283	-9283.7	-52.1	9283.9	0.159
				15	170211.5	-21441.7	-40514.5	170211.5	0.315	-9457.2	5297.2	10839.7	0.167
				16	154424.8	-20730.5	-41243.0	154424.8	0.287	-9280.6	5621.2	10850.2	0.185
				17	168728.7	55929.0	-11067.5	168728.7	0.306	-2916.6	-6996.2	7579.7	0.118
				18	152942.0	56640.3	-11795.9	152942.0	0.278	-2740.0	-6672.2	7212.8	0.124
				19	168896.2	55924.1	14063.2	168896.2	0.307	2695.6	-6997.2	7498.4	0.117
				20	153109.6	56635.4	13334.7	153109.6	0.279	2872.2	-6673.2	7265.0	0.125
				21	169995.3	14254.2	43313.4	169995.3	0.312	9246.9	-379.4	9254.7	0.143
				22	154208.7	14965.5	42584.9	154208.7	0.284	9423.5	-55.4	9423.7	0.161
				23	170769.8	-21458.0	43254.3	170769.8	0.315	9250.0	5293.9	10657.8	0.164
				24	154983.2	-20746.7	42525.9	154983.2	0.289	9426.6	5617.9	10973.7	0.186
				25	171310.4	-63111.6	-11264.4	171310.4	0.319	-2906.1	11915.0	12264.2	0.188
				26	155523.8	-62400.4	-11992.9	155523.8	0.293	-2729.5	12239.0	12539.6	0.212
				27	171477.9	-63116.5	13866.3	171477.9	0.320	2706.0	11914.0	12217.4	0.187
				28	155691.3	-62405.3	13137.8	155691.3	0.293	2882.6	12238.0	12572.9	0.212
				29	188050.0	13435.0	-10286.5	188050.0	0.333	-3119.0	-755.3	3209.1	0.045
				30	135427.9	15805.8	-12714.8	135427.9	0.240	-2530.3	324.7	2551.0	0.050
				31	188824.5	-22277.2	-10345.5	188824.5	0.339	-3115.8	4918.1	5822.0	0.081

				32	136202.4	-19906.4	-12773.8	136202.4	0.248	-2527.1	5998.1	6508.7	0.126
				33	188217.5	13430.1	14844.2	188217.5	0.332	2493.2	-756.3	2605.4	0.036
				34	135595.4	15801.0	12415.9	135595.4	0.241	3081.9	323.7	3098.8	0.060
				35	188992.0	-22282.1	14785.1	188992.0	0.338	2496.3	4917.1	5514.5	0.077
				36	136369.9	-19911.2	12356.8	136369.9	0.249	3085.0	5997.1	6744.0	0.130
6	4.60	4.60	1.90	13	141206.7	14080.8	-48931.3	141206.7	0.265	-10807.2	-878.6	10842.9	0.202
				14	128806.6	13982.2	-49865.1	128806.6	0.243	-10549.2	-913.1	10588.7	0.216
				15	142565.8	-8540.4	-48998.2	142565.8	0.268	-10803.1	3662.3	11407.0	0.210
				16	130165.7	-8639.0	-49932.0	130165.7	0.246	-10545.1	3627.8	11151.7	0.225
				17	137415.2	40559.7	-12396.6	137415.2	0.252	-4309.0	-6146.6	7506.5	0.144
				18	125015.1	40461.2	-13330.4	125015.1	0.230	-4051.0	-6181.1	7390.3	0.155
				19	135525.3	40634.5	18852.0	135525.3	0.246	1265.0	-6121.2	6250.6	0.121
				20	123125.2	40536.0	17918.2	123125.2	0.225	1522.9	-6155.7	6341.3	0.135
				21	134907.0	14330.1	55230.6	134907.0	0.248	7772.6	-794.0	7813.1	0.152
				22	122506.9	14231.5	54296.8	122506.9	0.227	8030.6	-828.5	8073.2	0.173
				23	136266.1	-8291.1	55163.7	136266.1	0.252	7776.8	3746.8	8632.3	0.167
				24	123866.0	-8389.7	54230.0	123866.0	0.231	8034.7	3712.4	8850.9	0.188
				25	141945.7	-34844.3	-12619.5	141945.7	0.264	-4295.3	8989.6	9963.1	0.185
				26	129545.6	-34942.9	-13553.3	129545.6	0.243	-4037.3	8955.1	9823.2	0.199
				27	140055.8	-34769.5	18629.0	140055.8	0.259	1278.7	9015.0	9105.2	0.171
				28	127655.7	-34868.1	17695.3	127655.7	0.238	1536.6	8980.5	9111.0	0.188
				29	153467.6	14283.3	-11385.3	153467.6	0.275	-4605.1	-808.7	4675.6	0.080
				30	112134.0	13954.7	-14497.8	112134.0	0.202	-3745.3	-923.6	3857.5	0.090
				31	154826.8	-8337.9	-11452.1	154826.8	0.279	-4601.0	3732.1	5924.4	0.101
				32	113493.2	-8666.5	-14564.7	113493.2	0.206	-3741.2	3617.3	5203.9	0.121
				33	151577.7	14358.1	19863.3	151577.7	0.266	968.8	-783.4	1245.9	0.022
				34	110244.1	14029.5	16750.8	110244.1	0.196	1828.7	-898.2	2037.4	0.049
				35	152936.9	-8263.1	19796.5	152936.9	0.273	972.9	3757.5	3881.4	0.067
				36	111603.3	-8591.7	16683.9	111603.3	0.201	1832.8	3642.6	4077.7	0.096
7	3.50	3.50	1.90	13	80412.1	2786.7	-31759.6	80412.1	0.286	-5625.0	-2124.1	6012.7	0.197
				14	73081.5	2728.3	-31735.5	73081.5	0.262	-5642.8	-2167.1	6044.6	0.218
				15	83393.4	-6600.2	-31725.7	83393.4	0.295	-5630.9	2067.4	5998.4	0.189
				16	76062.8	-6658.7	-31701.6	76062.8	0.271	-5648.7	2024.3	6000.4	0.207
				17	76984.4	13678.6	-9670.2	76984.4	0.279	-1672.4	-7056.9	7252.3	0.248
				18	69653.8	13620.1	-9646.0	69653.8	0.256	-1690.2	-7100.0	7298.4	0.276
				19	77027.6	13627.7	9297.5	77027.6	0.279	1709.7	-7093.4	7296.6	0.249
				20	69697.0	13569.2	9321.7	69697.0	0.256	1691.9	-7136.5	7334.3	0.277
				21	80556.2	2617.2	31466.0	80556.2	0.286	5648.7	-2245.9	6078.8	0.198
				22	73225.6	2558.8	31490.2	73225.6	0.262	5630.9	-2288.9	6078.4	0.218
				23	83537.5	-6769.7	31499.9	83537.5	0.296	5642.9	1945.6	5968.9	0.188
				24	76206.9	-6828.2	31524.1	76206.9	0.272	5625.1	1902.5	5938.1	0.205
				25	86922.1	-17611.1	-9557.2	86922.1	0.311	-1691.9	6914.7	7118.7	0.215
				26	79591.6	-17669.6	-9533.1	79591.6	0.287	-1709.7	6871.6	7081.1	0.234
				27	86965.4	-17662.0	9410.5	86965.4	0.311	1690.2	6878.1	7082.8	0.214
				28	79634.8	-17720.5	9434.6	79634.8	0.287	1672.4	6835.1	7036.7	0.232
				29	89014.9	2795.4	-9658.8	89014.9	0.303	-1658.5	-2116.6	2688.9	0.079
				30	64579.6	2600.5	-9578.3	64579.6	0.223	-1717.8	-2260.2	2838.9	0.116
				31	91996.3	-6591.5	-9624.9	91996.3	0.313	-1664.3	2074.9	2659.9	0.076
				32	67561.0	-6786.4	-9544.4	67561.0	0.232	-1723.6	1931.3	2588.6	0.101
				33	89058.2	2744.5	9308.9	89058.2	0.303	1723.7	-2153.1	2758.1	0.081
				34	64622.9	2549.6	9389.4	64622.9	0.223	1664.3	-2296.7	2836.3	0.115
				35	92039.5	-6642.4	9342.8	92039.5	0.313	1717.8	2038.3	2665.7	0.076
				36	67604.2	-6837.3	9423.3	67604.2	0.232	1658.5	1894.8	2518.1	0.098
8	3.50	3.50	1.90	13	80555.4	2619.6	-31460.7	80555.4	0.286	-5650.7	-2244.7	6080.2	0.198
				14	73224.8	2560.7	-31500.0	73224.8	0.262	-5630.4	-2287.9	6077.5	0.218
				15	83536.8	-6767.3	-31492.4	83536.8	0.296	-5644.7	1946.7	5970.9	0.188
				16	76206.1	-6826.2	-31531.7	76206.1	0.272	-5624.4	1903.5	5937.8	0.205
				17	77027.4	13628.6	-9294.0	77027.4	0.279	-1711.4	-7093.0	7296.6	0.249
				18	69696.8	13569.6	-9333.2	69696.8	0.256	-1691.2	-7136.2	7333.9	0.277
				19	76984.7	13677.8	9674.4	76984.7	0.279	1671.2	-7057.3	7252.5	0.248

				20	69654.1	13618.9	9635.1	69654.1	0.256	1691.4	-7100.5	7299.2	0.276
				21	80413.2	2783.7	31767.3	80413.2	0.286	5624.5	-2125.7	6012.8	0.197
				22	73082.6	2724.8	31728.0	73082.6	0.262	5644.8	-2168.9	6047.1	0.218
				23	83394.6	-6603.2	31735.6	83394.6	0.295	5630.6	2065.8	5997.5	0.189
				24	76064.0	-6662.1	31696.3	76064.0	0.271	5650.8	2022.6	6001.9	0.207
				25	86965.2	-17661.1	-9399.6	86965.2	0.311	-1691.4	6878.5	7083.4	0.214
				26	79634.5	-17720.1	-9438.9	79634.5	0.287	-1671.1	6835.3	7036.6	0.232
				27	86922.5	-17611.9	9568.8	86922.5	0.311	1691.2	6914.2	7118.1	0.215
				28	79591.9	-17670.8	9529.5	79591.9	0.287	1711.4	6871.0	7081.0	0.234
				29	89058.0	2746.0	-9285.1	89058.0	0.303	-1728.0	-2152.6	2760.4	0.082
				30	64622.6	2549.5	-9416.0	64622.6	0.223	-1660.5	-2296.6	2834.0	0.115
				31	92039.3	-6640.9	-9316.8	92039.3	0.313	-1722.0	2038.9	2668.8	0.076
				32	67603.9	-6837.4	-9447.7	67603.9	0.232	-1654.5	1894.9	2515.5	0.098
				33	89015.3	2795.2	9683.3	89015.3	0.303	1654.6	-2116.9	2686.8	0.079
				34	64579.9	2598.7	9552.3	64579.9	0.223	1722.0	-2260.9	2842.0	0.116
				35	91996.7	-6591.7	9651.6	91996.7	0.313	1660.6	2074.6	2657.3	0.076
				36	67561.3	-6788.2	9520.7	67561.3	0.232	1728.0	1930.6	2591.0	0.101
9	3.50	3.50	1.90	13	83393.8	6602.6	-31727.0	83393.8	0.295	-5631.3	-2066.3	5998.4	0.189
				14	76063.2	6661.6	-31702.9	76063.2	0.271	-5649.1	-2023.0	6000.4	0.207
				15	80412.5	-2784.3	-31759.8	80412.5	0.286	-5625.6	2125.2	6013.7	0.197
				16	73081.9	-2725.3	-31735.7	73081.9	0.262	-5643.4	2168.4	6045.6	0.218
				17	86922.3	17611.7	-9559.4	86922.3	0.311	-1691.8	-6914.4	7118.3	0.215
				18	79591.7	17670.7	-9535.3	79591.7	0.287	-1709.6	-6871.2	7080.6	0.234
				19	86965.4	17661.3	9408.7	86965.4	0.311	1690.6	-6878.4	7083.1	0.214
				20	79634.8	17720.3	9432.8	79634.8	0.287	1672.9	-6835.2	7036.9	0.232
				21	83537.5	6767.8	31499.9	83537.5	0.296	5643.4	-1946.4	5969.7	0.188
				22	76206.9	6826.8	31523.9	76206.9	0.272	5625.7	-1903.1	5938.9	0.205
				23	80556.1	-2619.1	31467.1	80556.1	0.286	5649.1	2245.1	6078.9	0.198
				24	73225.5	-2560.1	31491.2	73225.5	0.262	5631.4	2288.3	6078.6	0.218
				25	76984.5	-13678.0	-9668.6	76984.5	0.279	-1672.9	7057.2	7252.7	0.248
				26	69653.9	-13619.0	-9644.5	69653.9	0.256	-1690.6	7100.4	7298.9	0.276
				27	77027.6	-13628.4	9299.5	77027.6	0.279	1709.6	7093.1	7296.2	0.249
				28	69697.0	-13569.4	9323.6	69697.0	0.256	1691.8	7136.3	7334.1	0.277
				29	91996.5	6591.5	-9625.6	91996.5	0.313	-1664.5	-2074.8	2659.9	0.076
				30	67561.1	6788.2	-9545.4	67561.1	0.232	-1723.6	-1930.7	2588.2	0.101
				31	89015.1	-2795.4	-9658.4	89015.1	0.303	-1658.8	2116.7	2689.2	0.079
				32	64579.7	-2598.7	-9578.2	64579.7	0.223	-1717.9	2260.8	2839.4	0.116
				33	92039.6	6641.0	9342.4	92039.6	0.313	1718.0	-2038.8	2666.1	0.076
				34	67604.2	6837.7	9422.6	67604.2	0.232	1658.8	-1894.7	2518.3	0.098
				35	89058.2	-2745.9	9309.7	89058.2	0.303	1723.7	2152.7	2757.7	0.081
				36	64622.8	-2549.2	9389.9	64622.8	0.223	1664.5	2296.7	2836.4	0.115
10	3.50	3.50	1.90	13	83538.4	6770.5	-31493.5	83538.4	0.296	-5645.1	-1945.0	5970.7	0.188
				14	76207.8	6829.0	-31532.6	76207.8	0.272	-5624.9	-1901.9	5937.7	0.205
				15	80557.0	-2616.4	-31460.7	80557.0	0.286	-5651.2	2246.5	6081.4	0.199
				16	73226.5	-2557.9	-31499.9	73226.5	0.262	-5631.0	2289.6	6078.7	0.218
				17	86965.7	17662.2	-9401.5	86965.7	0.311	-1691.2	-6877.9	7082.8	0.214
				18	79635.1	17720.8	-9440.6	79635.1	0.287	-1671.1	-6834.9	7036.2	0.232
				19	86922.0	17611.1	9567.3	86922.0	0.311	1691.6	-6914.7	7118.7	0.215
				20	79591.4	17669.6	9528.1	79591.4	0.287	1711.8	-6871.7	7081.7	0.234
				21	83392.8	6600.0	31735.7	83392.8	0.295	5631.2	-2067.6	5998.8	0.189
				22	76062.2	6658.5	31696.6	76062.2	0.271	5651.4	-2024.6	6003.1	0.208
				23	80411.4	-2787.0	31768.5	80411.4	0.286	5625.0	2123.8	6012.6	0.197
				24	73080.9	-2728.4	31729.3	73080.9	0.262	5645.2	2166.9	6046.8	0.218
				25	77027.8	-13627.4	-9292.3	77027.8	0.279	-1711.8	7093.6	7297.2	0.249
				26	69697.3	-13568.9	-9331.5	69697.3	0.256	-1691.6	7136.7	7334.4	0.277
				27	76984.2	-13678.6	9676.4	76984.2	0.279	1671.1	7056.8	7251.9	0.248
				28	69653.6	-13620.1	9637.3	69653.6	0.256	1691.3	7099.9	7298.5	0.276
				29	92039.8	6642.6	-9317.6	92039.8	0.313	-1722.0	-2038.2	2668.2	0.076
				30	67604.5	6837.6	-9448.1	67604.5	0.232	-1654.7	-1894.6	2515.4	0.098
				31	89058.4	-2744.3	-9284.8	89058.4	0.303	-1728.2	2153.3	2761.0	0.082

				32	64623.2	-2549.3	-9415.4	64623.2	0.223	-1660.8	2296.9	2834.5	0.115
				33	91996.1	6591.4	9651.2	91996.1	0.313	1660.9	-2075.0	2657.8	0.076
				34	67560.8	6786.5	9520.7	67560.8	0.232	1728.2	-1931.4	2591.7	0.101
				35	89014.7	-2795.5	9683.9	89014.7	0.303	1654.7	2116.5	2686.6	0.079
				36	64579.5	-2600.4	9553.4	64579.5	0.223	1722.0	2260.1	2841.4	0.116
11	4.60	4.60	1.90	13	136255.8	8290.4	-55524.8	136255.8	0.252	-7828.4	-3747.2	8679.0	0.167
				14	123854.5	8389.0	-54595.6	123854.5	0.231	-8085.4	-3712.7	8897.1	0.189
				15	134896.7	-14330.8	-55592.1	134896.7	0.248	-7824.2	793.7	7864.3	0.153
				16	122495.3	-14232.1	-54663.0	122495.3	0.227	-8081.2	828.1	8123.5	0.174
				17	140054.7	34769.4	-18742.4	140054.7	0.259	-1294.6	-9015.0	9107.5	0.171
				18	127653.3	34868.0	-17813.3	127653.3	0.238	-1551.6	-8980.5	9113.6	0.188
				19	141951.0	34844.8	12717.9	141951.0	0.264	4310.0	-8989.4	9969.3	0.185
				20	129549.7	34943.4	13647.0	129549.7	0.243	4053.0	-8955.0	9829.5	0.200
				21	142576.9	8541.6	49342.9	142576.9	0.268	10853.6	-3661.9	11454.7	0.211
				22	130175.5	8640.2	50272.1	130175.5	0.246	10596.6	-3627.4	11200.3	0.226
				23	141217.7	-14079.6	49275.5	141217.7	0.265	10857.9	878.9	10893.4	0.203
				24	128816.4	-13981.0	50204.7	128816.4	0.243	10600.9	913.4	10640.2	0.217
				25	135524.3	-40634.5	-18967.0	135524.3	0.246	-1280.4	6121.1	6253.5	0.121
				26	123123.0	-40535.9	-18037.9	123123.0	0.225	-1537.4	6155.5	6344.6	0.136
				27	137420.6	-40559.2	12493.3	137420.6	0.252	4324.2	6146.6	7515.3	0.144
				28	125019.3	-40460.5	13422.4	125019.3	0.230	4067.2	6181.1	7399.2	0.156
				29	152937.3	8263.0	-19905.1	152937.3	0.273	-989.8	-3757.6	3885.8	0.067
				30	111599.5	8591.7	-16807.9	111599.5	0.201	-1846.5	-3642.7	4084.0	0.096
				31	151578.2	-14358.2	-19972.4	151578.2	0.266	-985.5	783.2	1258.9	0.022
				32	110240.3	-14029.5	-16875.3	110240.3	0.196	-1842.2	898.1	2049.5	0.049
				33	154833.6	8338.3	11555.2	154833.6	0.280	4614.8	-3732.0	5935.0	0.101
				34	113495.8	8667.1	14652.4	113495.8	0.206	3758.2	-3617.1	5216.1	0.121
				35	153474.5	-14282.9	11487.9	153474.5	0.275	4619.1	808.8	4689.4	0.080
				36	112136.7	-13954.1	14585.0	112136.7	0.202	3762.4	923.7	3874.1	0.091
12	4.60	4.60	1.90	13	171048.6	21468.8	-43556.8	171048.6	0.316	-9287.7	-5293.4	10690.3	0.164
				14	155290.9	20759.0	-42826.2	155290.9	0.289	-9464.6	-5617.1	11006.0	0.186
				15	170276.5	-14244.1	-43616.4	170276.5	0.312	-9284.1	378.7	9291.9	0.143
				16	154518.8	-14954.0	-42885.8	154518.8	0.285	-9461.1	55.1	9461.2	0.161
				17	171736.8	63127.1	-13970.8	171736.8	0.320	-2717.6	-11912.1	12218.2	0.187
				18	155979.2	62417.2	-13240.2	155979.2	0.293	-2894.6	-12235.8	12573.5	0.212
				19	171555.1	63121.3	11329.0	171555.1	0.320	2917.5	-11913.2	12265.2	0.188
				20	155797.5	62411.4	12059.6	155797.5	0.293	2740.6	-12236.8	12540.0	0.212
				21	170442.9	21449.4	40775.9	170442.9	0.315	9496.1	-5296.9	10873.5	0.168
				22	154685.2	20739.6	41506.5	154685.2	0.288	9319.2	-5620.5	10882.9	0.185
				23	169670.8	-14263.5	40716.3	169670.8	0.311	9499.7	375.3	9507.1	0.147
				24	153913.2	-14973.4	41446.9	153913.2	0.284	9322.8	51.6	9322.9	0.159
				25	169163.2	-55916.1	-14169.5	169163.2	0.307	-2705.7	6995.0	7500.1	0.117
				26	153405.6	-56625.9	-13438.9	153405.6	0.279	-2882.7	6671.4	7267.5	0.125
				27	168981.5	-55921.9	11130.3	168981.5	0.307	2929.4	6994.0	7582.7	0.118
				28	153223.9	-56631.7	11860.9	153223.9	0.279	2752.5	6670.3	7215.9	0.124
				29	189220.0	22290.1	-14892.7	189220.0	0.339	-2507.1	-4917.0	5519.3	0.077
				30	136694.5	19924.0	-12457.4	136694.5	0.249	-3096.8	-5995.9	6748.4	0.130
				31	188447.9	-13422.8	-14952.3	188447.9	0.333	-2503.5	755.1	2614.9	0.036
				32	135922.4	-15789.0	-12517.0	135922.4	0.242	-3093.2	-323.8	3110.1	0.060
				33	189038.3	22284.3	10407.1	189038.3	0.339	3128.1	-4918.0	5828.6	0.081
				34	136512.8	19918.1	12842.4	136512.8	0.249	2538.3	-5996.9	6512.0	0.125
				35	188266.2	-13428.6	10347.5	188266.2	0.333	3131.7	754.1	3221.2	0.045
				36	135740.7	-15794.8	12782.8	135740.7	0.241	2541.9	-324.8	2562.6	0.050
13	4.60	4.60	1.90	13	171470.6	22405.2	-42655.9	171470.6	0.316	-8817.9	-5331.0	10304.1	0.158
				14	155840.5	21777.2	-42765.4	155840.5	0.289	-8795.7	-5538.7	10394.3	0.175
				15	170674.9	-15017.3	-42648.2	170674.9	0.312	-8818.4	278.7	8822.8	0.136
				16	155044.8	-15645.3	-42757.8	155044.8	0.285	-8796.3	71.0	8796.5	0.149
				17	172251.6	66059.8	-12739.5	172251.6	0.321	-2653.3	-11875.9	12168.7	0.186
				18	156621.5	65431.8	-12849.0	156621.5	0.294	-2631.1	-12083.6	12366.7	0.208
				19	172125.8	66055.6	12910.8	172125.8	0.321	2630.1	-11876.1	12163.9	0.186

				20	156495.8	65427.6	12801.3	156495.8	0.294	2652.2	-12083.8	12371.4	0.208
				21	171051.3	22391.3	42845.2	171051.3	0.315	8793.2	-5331.7	10283.4	0.158
				22	155421.2	21763.3	42735.6	155421.2	0.288	8815.4	-5539.4	10411.4	0.176
				23	170255.6	-15031.1	42852.8	170255.6	0.311	8792.7	278.0	8797.0	0.136
				24	154625.5	-15659.1	42743.3	154625.5	0.284	8814.8	70.3	8815.1	0.150
				25	169599.2	-58681.6	-12713.9	169599.2	0.308	-2655.2	6823.1	7321.5	0.114
				26	153969.2	-59309.6	-12823.5	153969.2	0.280	-2633.0	6615.4	7120.1	0.122
				27	169473.4	-58685.8	12936.4	169473.4	0.307	2628.1	6822.9	7311.5	0.113
				28	153843.4	-59313.8	12826.9	153843.4	0.280	2650.3	6615.2	7126.4	0.122
				29	189558.4	23133.0	-12602.7	189558.4	0.340	-2679.8	-5089.0	5751.5	0.080
				30	137458.2	21039.6	-12967.9	137458.2	0.250	-2605.9	-5781.2	6341.4	0.121
				31	188762.6	-14289.5	-12595.0	188762.6	0.334	-2680.4	520.7	2730.5	0.038
				32	136662.4	-16382.8	-12960.2	136662.4	0.242	-2606.5	-171.5	2612.1	0.050
				33	189432.6	23128.8	13047.6	189432.6	0.339	2603.5	-5089.2	5716.5	0.079
				34	137332.4	21035.5	12682.4	137332.4	0.250	2677.4	-5781.4	6371.3	0.122
				35	188636.8	-14293.6	13055.3	188636.8	0.333	2602.9	520.5	2654.5	0.037
				36	136536.6	-16387.0	12690.1	136536.6	0.242	2676.9	-171.7	2682.4	0.052
14	4.60	4.60	1.90	13	171049.7	22391.3	-42845.3	171049.7	0.315	-8793.3	-5331.7	10283.5	0.158
				14	155419.7	21763.2	-42735.7	155419.7	0.288	-8815.5	-5539.4	10411.4	0.176
				15	170254.0	-15031.2	-42852.8	170254.0	0.311	-8792.8	278.0	8797.2	0.136
				16	154623.9	-15659.2	-42743.2	154623.9	0.284	-8815.0	70.3	8815.3	0.150
				17	172125.4	66055.6	-12911.1	172125.4	0.321	-2630.0	-11876.1	12163.9	0.186
				18	156495.3	65427.6	-12801.5	156495.3	0.294	-2652.2	-12083.8	12371.4	0.208
				19	172251.2	66059.8	12739.2	172251.2	0.321	2653.3	-11876.1	12168.9	0.186
				20	156621.1	65431.8	12848.8	156621.1	0.294	2631.1	-12083.8	12366.9	0.208
				21	171469.0	22405.1	42655.8	171469.0	0.316	8817.8	-5331.7	10304.4	0.158
				22	155839.0	21777.1	42765.4	155839.0	0.289	8795.6	-5539.4	10394.6	0.175
				23	170673.3	-15017.3	42648.2	170673.3	0.312	8818.3	278.0	8822.7	0.136
				24	155043.3	-15645.3	42757.8	155043.3	0.285	8796.1	70.3	8796.4	0.149
				25	169473.0	-58685.8	-12936.3	169473.0	0.307	-2628.3	6822.9	7311.6	0.113
				26	153842.9	-59313.8	-12826.7	153842.9	0.280	-2650.5	6615.2	7126.4	0.122
				27	169598.8	-58681.6	12714.1	169598.8	0.308	2655.1	6822.9	7321.3	0.114
				28	153968.7	-59309.7	12823.6	153968.7	0.280	2632.9	6615.2	7119.9	0.122
				29	189432.1	23128.8	-13047.8	189432.1	0.339	-2603.5	-5089.2	5716.5	0.079
				30	137331.9	21035.4	-12682.4	137331.9	0.250	-2677.5	-5781.5	6371.3	0.122
				31	188636.4	-14293.6	-13055.3	188636.4	0.333	-2603.0	520.5	2654.5	0.037
				32	136536.2	-16387.0	-12690.0	136536.2	0.242	-2677.0	-171.8	2682.5	0.052
				33	189557.9	23133.0	12602.6	189557.9	0.340	2679.8	-5089.2	5751.6	0.080
				34	137457.7	21039.6	12967.9	137457.7	0.250	2605.8	-5781.5	6341.6	0.121
				35	188762.2	-14289.4	12595.0	188762.2	0.334	2680.4	520.5	2730.4	0.038
				36	136662.0	-16382.9	12960.3	136662.0	0.242	2606.4	-171.8	2612.0	0.050
15	4.60	4.60	1.90	13	170441.4	21449.4	-40776.0	170441.4	0.315	-9495.8	-5296.9	10873.3	0.168
				14	154683.8	20739.5	-41506.5	154683.8	0.288	-9318.9	-5620.6	10882.7	0.185
				15	169669.4	-14263.5	-40716.1	169669.4	0.311	-9499.4	375.3	9506.8	0.147
				16	153911.7	-14973.5	-41446.7	153911.7	0.284	-9322.5	51.6	9322.6	0.159
				17	171554.7	63121.3	-11329.3	171554.7	0.320	-2917.4	-11913.2	12265.2	0.188
				18	155797.0	62411.4	-12059.9	155797.0	0.293	-2740.5	-12236.8	12540.0	0.212
				19	171736.4	63127.1	13970.5	171736.4	0.320	2717.7	-11912.1	12218.2	0.187
				20	155978.7	62417.1	13239.9	155978.7	0.293	2894.6	-12235.8	12573.5	0.212
				21	171047.1	21468.7	43556.7	171047.1	0.316	9288.0	-5293.4	10690.5	0.164
				22	155289.5	20758.8	42826.2	155289.5	0.289	9464.9	-5617.1	11006.2	0.186
				23	170275.1	-14244.3	43616.6	170275.1	0.312	9284.4	378.8	9292.2	0.144
				24	154517.4	-14954.2	42886.0	154517.4	0.285	9461.4	55.1	9461.5	0.161
				25	168981.1	-55921.8	-11129.9	168981.1	0.307	-2929.3	6994.0	7582.7	0.118
				26	153223.5	-56631.8	-11860.5	153223.5	0.279	-2752.4	6670.3	7215.9	0.124
				27	169162.8	-55916.1	14169.9	169162.8	0.307	2705.8	6995.0	7500.2	0.117
				28	153405.2	-56626.0	13439.3	153405.2	0.279	2882.8	6671.4	7267.6	0.125
				29	189037.9	22284.4	-10407.2	189037.9	0.339	-3128.0	-4918.0	5828.5	0.081
				30	136512.3	19918.0	-12842.4	136512.3	0.249	-2538.3	-5997.0	6512.0	0.125
				31	188265.8	-13428.5	-10347.4	188265.8	0.333	-3131.6	754.1	3221.1	0.045

				32	135740.3	-15794.9	-12782.6	135740.3	0.241	-2541.8	-324.8	2562.5	0.050
				33	189219.6	22290.2	14892.6	189219.6	0.339	2507.1	-4917.0	5519.3	0.077
				34	136694.1	19923.8	12457.4	136694.1	0.249	3096.9	-5995.9	6748.5	0.130
				35	188447.5	-13422.7	14952.4	188447.5	0.333	2503.6	755.2	2615.0	0.036
				36	135922.0	-15789.2	12517.2	135922.0	0.242	3093.3	-323.8	3110.2	0.060
16	4.60	4.60	1.90	13	142579.5	8547.1	-49342.6	142579.5	0.268	-10853.9	-3660.5	11454.5	0.211
				14	130178.2	8644.7	-50271.9	130178.2	0.246	-10596.9	-3626.1	11200.2	0.226
				15	141220.4	-14074.1	-49275.9	141220.4	0.265	-10858.0	880.3	10893.6	0.203
				16	128819.1	-13976.5	-50205.2	128819.1	0.243	-10601.0	914.7	10640.4	0.217
				17	141951.8	34846.8	-12716.6	141951.8	0.264	-4310.3	-8989.0	9969.0	0.185
				18	129550.5	34944.4	-13645.9	129550.5	0.243	-4053.4	-8954.6	9829.3	0.200
				19	140055.4	34768.1	18743.7	140055.4	0.259	1294.3	-9015.5	9107.9	0.171
				20	127654.1	34865.7	17814.4	127654.1	0.238	1551.2	-8981.1	9114.0	0.188
				21	136258.2	8284.7	55525.1	136258.2	0.252	7828.2	-3748.7	8679.5	0.168
				22	123856.9	8382.3	54595.8	123856.9	0.231	8085.1	-3714.3	8897.5	0.189
				23	134899.1	-14336.4	55591.8	134899.1	0.248	7824.1	792.1	7864.0	0.153
				24	122497.8	-14238.8	54662.5	122497.8	0.227	8081.0	826.5	8123.1	0.174
				25	137421.4	-40557.2	-12494.4	137421.4	0.252	-4324.0	6147.1	7515.5	0.144
				26	125020.1	-40459.5	-13423.7	125020.1	0.230	-4067.0	6181.5	7399.4	0.156
				27	135525.0	-40635.9	18965.9	135525.0	0.246	1280.6	6120.6	6253.1	0.121
				28	123123.7	-40538.3	18036.6	123123.7	0.225	1537.6	6155.0	6344.1	0.135
				29	154834.4	8341.5	-11554.7	154834.4	0.280	-4614.8	-3731.5	5934.7	0.101
				30	113496.6	8666.9	-14652.3	113496.6	0.206	-3758.4	-3616.9	5216.1	0.121
				31	153475.3	-14279.6	-11488.0	153475.3	0.275	-4618.9	809.3	4689.3	0.080
				32	112137.5	-13954.3	-14585.7	112137.5	0.202	-3762.5	924.0	3874.3	0.091
				33	152938.0	8262.8	19905.6	152938.0	0.273	989.8	-3758.0	3886.1	0.067
				34	111600.2	8588.2	16808.0	111600.2	0.201	1846.2	-3643.3	4084.4	0.096
				35	151578.9	-14358.4	19972.3	151578.9	0.266	985.7	782.9	1258.7	0.022
				36	110241.1	-14033.0	16874.6	110241.1	0.196	1842.1	897.5	2049.1	0.049
17	1.20	1.20	0.40	13	8713.8	-66.5	-162.3	8713.8	0.311	0.0	0.0	0.0	0.000
				14	8110.7	-53.6	-159.6	8110.7	0.289	0.0	0.0	0.0	0.000
				15	7786.5	-26.6	-162.2	7786.5	0.278	0.0	0.0	0.0	0.000
				16	7183.4	-13.7	-159.5	7183.4	0.256	0.0	0.0	0.0	0.000
				17	9793.1	-112.9	-52.5	9793.1	0.349	0.0	0.0	0.0	0.000
				18	9190.0	-100.0	-49.8	9190.0	0.328	0.0	0.0	0.0	0.000
				19	9790.9	-112.8	41.7	9790.9	0.349	0.0	0.0	0.0	0.000
				20	9187.8	-99.9	44.4	9187.8	0.328	0.0	0.0	0.0	0.000
				21	8706.4	-66.0	151.7	8706.4	0.310	0.0	0.0	0.0	0.000
				22	8103.3	-53.2	154.5	8103.3	0.289	0.0	0.0	0.0	0.000
				23	7779.1	-26.1	151.8	7779.1	0.277	0.0	0.0	0.0	0.000
				24	7176.1	-13.2	154.5	7176.1	0.256	0.0	0.0	0.0	0.000
				25	6702.1	20.2	-52.2	6702.1	0.239	0.0	0.0	0.0	0.000
				26	6099.0	33.0	-49.5	6099.0	0.217	0.0	0.0	0.0	0.000
				27	6699.9	20.3	42.0	6699.9	0.239	0.0	0.0	0.0	0.000
				28	6096.8	33.2	44.7	6096.8	0.217	0.0	0.0	0.0	0.000
				29	9414.8	-81.3	-55.6	9414.8	0.336	0.0	0.0	0.0	0.000
				30	7404.5	-38.4	-46.5	7404.5	0.264	0.0	0.0	0.0	0.000
				31	8487.5	-41.4	-55.5	8487.5	0.303	0.0	0.0	0.0	0.000
				32	6477.2	1.5	-46.4	6477.2	0.231	0.0	0.0	0.0	0.000
				33	9412.6	-81.2	38.6	9412.6	0.336	0.0	0.0	0.0	0.000
				34	7402.3	-38.3	47.7	7402.3	0.264	0.0	0.0	0.0	0.000
				35	8485.3	-41.3	38.7	8485.3	0.303	0.0	0.0	0.0	0.000
				36	6475.0	1.6	47.8	6475.0	0.231	0.0	0.0	0.0	0.000
18	1.20	1.20	0.40	13	8731.4	-67.1	-158.6	8731.4	0.311	0.0	0.0	0.0	0.000
				14	8128.8	-54.3	-159.0	8128.8	0.290	0.0	0.0	0.0	0.000
				15	7757.5	-25.5	-158.6	7757.5	0.277	0.0	0.0	0.0	0.000
				16	7154.9	-12.7	-159.0	7154.9	0.255	0.0	0.0	0.0	0.000
				17	9868.1	-115.8	-47.3	9868.1	0.352	0.0	0.0	0.0	0.000
				18	9265.5	-103.0	-47.7	9265.5	0.330	0.0	0.0	0.0	0.000
				19	9868.6	-115.8	48.1	9868.6	0.352	0.0	0.0	0.0	0.000

				20	9266.0	-103.0	47.7	9266.0	0.330	0.0	0.0	0.0	0.000
				21	8732.9	-67.3	159.4	8732.9	0.311	0.0	0.0	0.0	0.000
				22	8130.3	-54.5	159.0	8130.3	0.290	0.0	0.0	0.0	0.000
				23	7759.1	-25.7	159.4	7759.1	0.277	0.0	0.0	0.0	0.000
				24	7156.5	-12.9	159.0	7156.5	0.255	0.0	0.0	0.0	0.000
				25	6621.8	23.0	-47.4	6621.8	0.236	0.0	0.0	0.0	0.000
				26	6019.2	35.8	-47.7	6019.2	0.215	0.0	0.0	0.0	0.000
				27	6622.3	23.0	48.1	6622.3	0.236	0.0	0.0	0.0	0.000
				28	6019.7	35.7	47.7	6019.7	0.215	0.0	0.0	0.0	0.000
				29	9434.9	-82.1	-46.9	9434.9	0.336	0.0	0.0	0.0	0.000
				30	7426.3	-39.5	-48.1	7426.3	0.265	0.0	0.0	0.0	0.000
				31	8461.1	-40.5	-46.9	8461.1	0.302	0.0	0.0	0.0	0.000
				32	6452.4	2.1	-48.1	6452.4	0.230	0.0	0.0	0.0	0.000
				33	9435.4	-82.1	48.5	9435.4	0.336	0.0	0.0	0.0	0.000
				34	7426.8	-39.6	47.3	7426.8	0.265	0.0	0.0	0.0	0.000
				35	8461.5	-40.5	48.5	8461.5	0.302	0.0	0.0	0.0	0.000
				36	6452.9	2.1	47.3	6452.9	0.230	0.0	0.0	0.0	0.000
19	1.20	1.20	0.40	13	8732.9	-67.3	-159.4	8732.9	0.311	0.0	0.0	0.0	0.000
				14	8130.3	-54.5	-159.0	8130.3	0.290	0.0	0.0	0.0	0.000
				15	7759.1	-25.7	-159.4	7759.1	0.277	0.0	0.0	0.0	0.000
				16	7156.5	-12.9	-159.0	7156.5	0.255	0.0	0.0	0.0	0.000
				17	9868.6	-115.8	-48.1	9868.6	0.352	0.0	0.0	0.0	0.000
				18	9266.0	-103.0	-47.7	9266.0	0.330	0.0	0.0	0.0	0.000
				19	9868.1	-115.8	47.3	9868.1	0.352	0.0	0.0	0.0	0.000
				20	9265.5	-103.0	47.7	9265.5	0.330	0.0	0.0	0.0	0.000
				21	8731.4	-67.1	158.6	8731.4	0.311	0.0	0.0	0.0	0.000
				22	8128.8	-54.3	159.0	8128.8	0.290	0.0	0.0	0.0	0.000
				23	7757.5	-25.5	158.6	7757.5	0.277	0.0	0.0	0.0	0.000
				24	7154.9	-12.7	159.0	7154.9	0.255	0.0	0.0	0.0	0.000
				25	6622.3	23.0	-48.1	6622.3	0.236	0.0	0.0	0.0	0.000
				26	6019.7	35.7	-47.7	6019.7	0.215	0.0	0.0	0.0	0.000
				27	6621.8	23.0	47.3	6621.8	0.236	0.0	0.0	0.0	0.000
				28	6019.3	35.8	47.7	6019.3	0.215	0.0	0.0	0.0	0.000
				29	9435.4	-82.1	-48.5	9435.4	0.336	0.0	0.0	0.0	0.000
				30	7426.8	-39.6	-47.3	7426.8	0.265	0.0	0.0	0.0	0.000
				31	8461.5	-40.5	-48.5	8461.5	0.302	0.0	0.0	0.0	0.000
				32	6452.9	2.1	-47.3	6452.9	0.230	0.0	0.0	0.0	0.000
				33	9434.9	-82.1	46.9	9434.9	0.336	0.0	0.0	0.0	0.000
				34	7426.3	-39.5	48.1	7426.3	0.265	0.0	0.0	0.0	0.000
				35	8461.1	-40.5	46.9	8461.1	0.302	0.0	0.0	0.0	0.000
				36	6452.4	2.1	48.1	6452.4	0.230	0.0	0.0	0.0	0.000
20	1.20	1.20	0.40	13	8706.4	-66.0	-151.7	8706.4	0.310	0.0	0.0	0.0	0.000
				14	8103.4	-53.2	-154.5	8103.4	0.289	0.0	0.0	0.0	0.000
				15	7779.1	-26.1	-151.8	7779.1	0.277	0.0	0.0	0.0	0.000
				16	7176.1	-13.2	-154.5	7176.1	0.256	0.0	0.0	0.0	0.000
				17	9790.9	-112.8	-41.7	9790.9	0.349	0.0	0.0	0.0	0.000
				18	9187.8	-99.9	-44.4	9187.8	0.328	0.0	0.0	0.0	0.000
				19	9793.1	-112.9	52.5	9793.1	0.349	0.0	0.0	0.0	0.000
				20	9190.0	-100.0	49.8	9190.0	0.328	0.0	0.0	0.0	0.000
				21	8713.8	-66.5	162.3	8713.8	0.311	0.0	0.0	0.0	0.000
				22	8110.7	-53.6	159.6	8110.7	0.289	0.0	0.0	0.0	0.000
				23	7786.5	-26.6	162.2	7786.5	0.278	0.0	0.0	0.0	0.000
				24	7183.4	-13.7	159.5	7183.4	0.256	0.0	0.0	0.0	0.000
				25	6699.9	20.3	-42.0	6699.9	0.239	0.0	0.0	0.0	0.000
				26	6096.8	33.2	-44.7	6096.8	0.217	0.0	0.0	0.0	0.000
				27	6702.1	20.2	52.2	6702.1	0.239	0.0	0.0	0.0	0.000
				28	6099.0	33.0	49.5	6099.0	0.217	0.0	0.0	0.0	0.000
				29	9412.6	-81.2	-38.6	9412.6	0.336	0.0	0.0	0.0	0.000
				30	7402.3	-38.3	-47.7	7402.3	0.264	0.0	0.0	0.0	0.000
				31	8485.3	-41.3	-38.7	8485.3	0.303	0.0	0.0	0.0	0.000

				32	6475.0	1.6	-47.8	6475.0	0.231	0.0	0.0	0.0	0.000
				33	9414.8	-81.3	55.6	9414.8	0.336	0.0	0.0	0.0	0.000
				34	7404.5	-38.4	46.5	7404.5	0.264	0.0	0.0	0.0	0.000
				35	8487.5	-41.4	55.5	8487.5	0.303	0.0	0.0	0.0	0.000
				36	6477.3	1.5	46.4	6477.3	0.231	0.0	0.0	0.0	0.000
21	1.20	1.20	0.40	13	7789.4	26.8	-162.7	7789.4	0.278	0.0	0.0	0.0	0.000
				14	7186.7	13.9	-159.9	7186.7	0.256	0.0	0.0	0.0	0.000
				15	8716.0	66.7	-162.8	8716.0	0.311	0.0	0.0	0.0	0.000
				16	8113.3	53.8	-160.0	8113.3	0.289	0.0	0.0	0.0	0.000
				17	6705.9	-20.0	-52.4	6705.9	0.239	0.0	0.0	0.0	0.000
				18	6103.2	-32.9	-49.6	6103.2	0.218	0.0	0.0	0.0	0.000
				19	6703.8	-20.2	42.1	6703.8	0.239	0.0	0.0	0.0	0.000
				20	6101.1	-33.0	44.8	6101.1	0.218	0.0	0.0	0.0	0.000
				21	7782.4	26.2	152.2	7782.4	0.277	0.0	0.0	0.0	0.000
				22	7179.7	13.4	154.9	7179.7	0.256	0.0	0.0	0.0	0.000
				23	8708.9	66.2	152.1	8708.9	0.311	0.0	0.0	0.0	0.000
				24	8106.2	53.3	154.8	8106.2	0.289	0.0	0.0	0.0	0.000
				25	9794.5	113.1	-52.7	9794.5	0.349	0.0	0.0	0.0	0.000
				26	9191.8	100.2	-49.9	9191.8	0.328	0.0	0.0	0.0	0.000
				27	9792.4	112.9	41.8	9792.4	0.349	0.0	0.0	0.0	0.000
				28	9189.7	100.1	44.5	9189.7	0.328	0.0	0.0	0.0	0.000
				29	8490.1	41.6	-55.7	8490.1	0.303	0.0	0.0	0.0	0.000
				30	6481.1	-1.3	-46.6	6481.1	0.231	0.0	0.0	0.0	0.000
				31	9416.7	81.5	-55.7	9416.7	0.336	0.0	0.0	0.0	0.000
				32	7407.7	38.7	-46.6	7407.7	0.264	0.0	0.0	0.0	0.000
				33	8488.0	41.4	38.8	8488.0	0.303	0.0	0.0	0.0	0.000
				34	6479.0	-1.4	47.9	6479.0	0.231	0.0	0.0	0.0	0.000
				35	9414.6	81.3	38.7	9414.6	0.336	0.0	0.0	0.0	0.000
				36	7405.6	38.5	47.8	7405.6	0.264	0.0	0.0	0.0	0.000
22	1.20	1.20	0.40	13	7780.8	26.0	-159.1	7780.8	0.277	0.0	0.0	0.0	0.000
				14	7178.9	13.2	-159.5	7178.9	0.256	0.0	0.0	0.0	0.000
				15	8723.0	67.9	-159.1	8723.0	0.311	0.0	0.0	0.0	0.000
				16	8121.1	55.1	-159.5	8121.1	0.290	0.0	0.0	0.0	0.000
				17	6680.6	-23.1	-47.5	6680.6	0.238	0.0	0.0	0.0	0.000
				18	6078.7	-35.9	-47.9	6078.7	0.217	0.0	0.0	0.0	0.000
				19	6679.9	-23.2	48.2	6679.9	0.238	0.0	0.0	0.0	0.000
				20	6078.0	-36.0	47.8	6078.0	0.217	0.0	0.0	0.0	0.000
				21	7778.3	25.6	159.9	7778.3	0.277	0.0	0.0	0.0	0.000
				22	7176.4	12.8	159.5	7176.4	0.256	0.0	0.0	0.0	0.000
				23	8720.5	67.6	159.9	8720.5	0.311	0.0	0.0	0.0	0.000
				24	8118.6	54.8	159.5	8118.6	0.289	0.0	0.0	0.0	0.000
				25	9821.4	116.7	-47.5	9821.4	0.350	0.0	0.0	0.0	0.000
				26	9219.5	103.9	-47.8	9219.5	0.329	0.0	0.0	0.0	0.000
				27	9820.6	116.6	48.2	9820.6	0.350	0.0	0.0	0.0	0.000
				28	9218.7	103.8	47.8	9218.7	0.329	0.0	0.0	0.0	0.000
				29	8482.1	40.8	-47.0	8482.1	0.302	0.0	0.0	0.0	0.000
				30	6475.8	-1.9	-48.3	6475.8	0.231	0.0	0.0	0.0	0.000
				31	9424.4	82.7	-47.0	9424.4	0.336	0.0	0.0	0.0	0.000
				32	7418.0	40.0	-48.3	7418.0	0.264	0.0	0.0	0.0	0.000
				33	8481.4	40.7	48.7	8481.4	0.302	0.0	0.0	0.0	0.000
				34	6475.0	-2.0	47.4	6475.0	0.231	0.0	0.0	0.0	0.000
				35	9423.6	82.6	48.7	9423.6	0.336	0.0	0.0	0.0	0.000
				36	7417.2	39.9	47.4	7417.2	0.264	0.0	0.0	0.0	0.000
23	1.20	1.20	0.40	13	7778.3	25.6	-159.9	7778.3	0.277	0.0	0.0	0.0	0.000
				14	7176.3	12.8	-159.5	7176.3	0.256	0.0	0.0	0.0	0.000
				15	8720.5	67.6	-159.9	8720.5	0.311	0.0	0.0	0.0	0.000
				16	8118.6	54.8	-159.5	8118.6	0.289	0.0	0.0	0.0	0.000
				17	6679.9	-23.2	-48.2	6679.9	0.238	0.0	0.0	0.0	0.000
				18	6078.0	-36.0	-47.8	6078.0	0.217	0.0	0.0	0.0	0.000
				19	6680.6	-23.1	47.5	6680.6	0.238	0.0	0.0	0.0	0.000

				20	6078.7	-35.9	47.9	6078.7	0.217	0.0	0.0	0.0	0.000
				21	7780.8	26.0	159.1	7780.8	0.277	0.0	0.0	0.0	0.000
				22	7178.9	13.2	159.5	7178.9	0.256	0.0	0.0	0.0	0.000
				23	8723.0	67.9	159.1	8723.0	0.311	0.0	0.0	0.0	0.000
				24	8121.1	55.1	159.5	8121.1	0.290	0.0	0.0	0.0	0.000
				25	9820.6	116.6	-48.2	9820.6	0.350	0.0	0.0	0.0	0.000
				26	9218.7	103.8	-47.8	9218.7	0.329	0.0	0.0	0.0	0.000
				27	9821.4	116.7	47.5	9821.4	0.350	0.0	0.0	0.0	0.000
				28	9219.5	103.9	47.8	9219.5	0.329	0.0	0.0	0.0	0.000
				29	8481.4	40.7	-48.7	8481.4	0.302	0.0	0.0	0.0	0.000
				30	6475.0	-2.0	-47.4	6475.0	0.231	0.0	0.0	0.0	0.000
				31	9423.6	82.6	-48.7	9423.6	0.336	0.0	0.0	0.0	0.000
				32	7417.2	39.9	-47.4	7417.2	0.264	0.0	0.0	0.0	0.000
				33	8482.1	40.8	47.0	8482.1	0.302	0.0	0.0	0.0	0.000
				34	6475.8	-1.9	48.3	6475.8	0.231	0.0	0.0	0.0	0.000
				35	9424.4	82.7	47.0	9424.4	0.336	0.0	0.0	0.0	0.000
				36	7418.0	40.0	48.3	7418.0	0.264	0.0	0.0	0.0	0.000
24	1.20	1.20	0.40	13	7782.4	26.2	-152.2	7782.4	0.277	0.0	0.0	0.0	0.000
				14	7179.7	13.4	-154.9	7179.7	0.256	0.0	0.0	0.0	0.000
				15	8709.0	66.2	-152.1	8709.0	0.311	0.0	0.0	0.0	0.000
				16	8106.3	53.3	-154.8	8106.3	0.289	0.0	0.0	0.0	0.000
				17	6703.8	-20.2	-42.1	6703.8	0.239	0.0	0.0	0.0	0.000
				18	6101.1	-33.0	-44.8	6101.1	0.218	0.0	0.0	0.0	0.000
				19	6705.9	-20.0	52.4	6705.9	0.239	0.0	0.0	0.0	0.000
				20	6103.2	-32.9	49.6	6103.2	0.218	0.0	0.0	0.0	0.000
				21	7789.4	26.7	162.7	7789.4	0.278	0.0	0.0	0.0	0.000
				22	7186.7	13.9	159.9	7186.7	0.256	0.0	0.0	0.0	0.000
				23	8716.0	66.7	162.8	8716.0	0.311	0.0	0.0	0.0	0.000
				24	8113.3	53.8	160.0	8113.3	0.289	0.0	0.0	0.0	0.000
				25	9792.4	112.9	-41.8	9792.4	0.349	0.0	0.0	0.0	0.000
				26	9189.7	100.1	-44.5	9189.7	0.328	0.0	0.0	0.0	0.000
				27	9794.5	113.1	52.7	9794.5	0.349	0.0	0.0	0.0	0.000
				28	9191.8	100.2	49.9	9191.8	0.328	0.0	0.0	0.0	0.000
				29	8488.0	41.4	-38.8	8488.0	0.303	0.0	0.0	0.0	0.000
				30	6479.0	-1.4	-47.9	6479.0	0.231	0.0	0.0	0.0	0.000
				31	9414.6	81.3	-38.7	9414.6	0.336	0.0	0.0	0.0	0.000
				32	7405.6	38.5	-47.8	7405.6	0.264	0.0	0.0	0.0	0.000
				33	8490.1	41.6	55.7	8490.1	0.303	0.0	0.0	0.0	0.000
				34	6481.1	-1.3	46.6	6481.1	0.231	0.0	0.0	0.0	0.000
				35	9416.7	81.5	55.7	9416.7	0.336	0.0	0.0	0.0	0.000
				36	7407.7	38.7	46.6	7407.7	0.264	0.0	0.0	0.0	0.000

RELAZIONE SULLE FONDAZIONI

Le fondazioni saranno realizzate a plinti e travi di collegamento in c.a. da realizzare in opera .

I plinti da realizzare in opera sono a bicchiere per permettere l'alloggiamento dei pilastri prefabbricati. Sotto i plinti è prevista la realizzazione di una base in cls magro di dim. come da esecutivi allegati, in modo da trasmettere al terreno una pressione max derivante dalla capacità portante calcolata nella allegata relazione geotecnica considerando i parametri riportati nella relazione geologica a firma del Dott. Geol. Domenico Bartolucci e i fattori di riduzione nelle combinazioni dinamiche utilizzati nella relazione geotecnica.

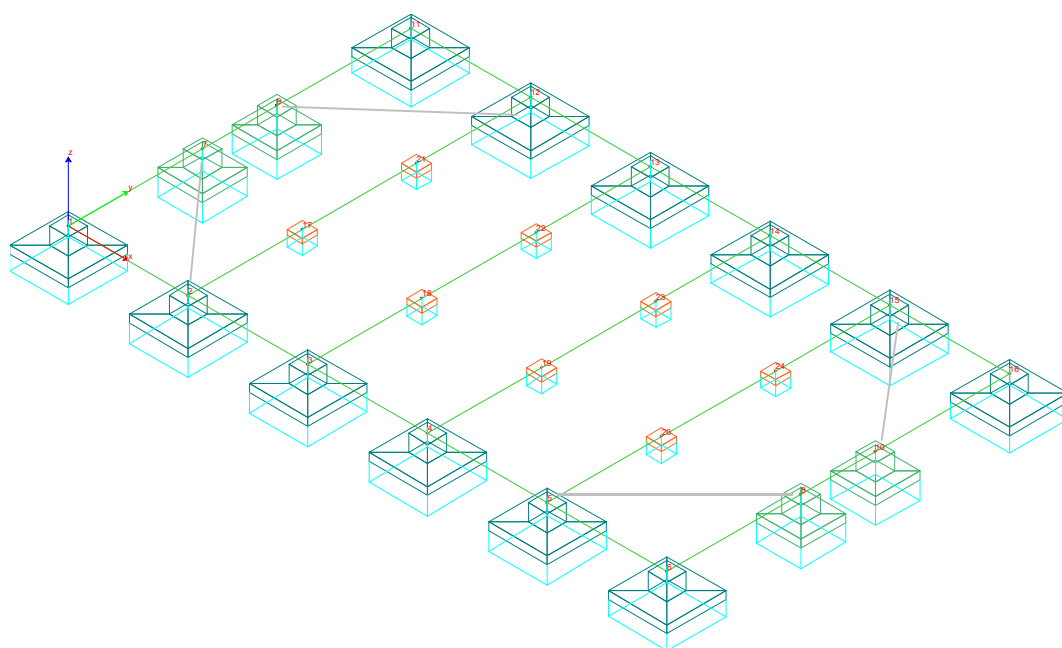
Pertanto la condizione (6.2.1) $Ed \leq R_d$ al § 6.2.4. del D.M. 17gennaio 2018 risulta verificata.

Il piano di posa della fondazione è impostato fino a raggiungimento del litotipo B costituito da limi-argillosi sabbiosi mediamente addensati, pertanto gli strati superficiali dovranno preventivamente essere asportati. Sotto i plinti è prevista la realizzazione di una base in cls magro di dimensioni come da esecutivi allegati.

(categoria profilo stratigrafico C, superficie topografica T1) .

Di seguito si riporta la verifica dei plinti di fondazione e la verifica delle travi di collegamento.

Pressioni massime sul terreno plinti



PLINTO 460X460

Pressioni massime sul terreno

Combinazioni agli Stati Limite Ultimi

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 1 Nodi: 11	11	0.9
Max	Plinto Sez. 1 Nodi: 14	2	1.4

Combinazioni agli Stati Limite di Salvaguardia della Vita

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 1 Nodi: 6	34	0.7
Max	Plinto Sez. 1 Nodi: 4	25	1.4

Combinazioni RARE Stati Limite di Esercizio

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 1 Nodi: 11	47	0.7
Max	Plinto Sez. 1 Nodi: 12	38	1.0

Combinazioni FREQUENTI Stati Limite di Esercizio

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 1 Nodi: 6	53	0.6
Max	Plinto Sez. 1 Nodi: 12	50	0.9

Combinazioni QUASI PERMANENTI Stati Limite di Esercizio

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 1 Nodi: 6	55	0.6
Max	Plinto Sez. 1 Nodi: 12	55	0.8

Combinazioni agli Stati Limite di Danno

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 1 Nodi: 6	77	0.7
Max	Plinto Sez. 1 Nodi: 13	62	1.2

Combinazioni agli Stati Limite di Operatività

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 1 Nodi: 6	101	0.7
Max	Plinto Sez. 1 Nodi: 13	86	1.2

PLINTO 350X350

Pressioni massime sul terreno

Combinazioni agli Stati Limite Ultimi

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 2 Nodi: 8	10	0.8
Max	Plinto Sez. 2 Nodi: 10	3	1.4

Combinazioni agli Stati Limite di Salvaguardia della Vita

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 2 Nodi: 7	34	0.8
Max	Plinto Sez. 2 Nodi: 10	21	1.4

Combinazioni RARE Stati Limite di Esercizio

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 2 Nodi: 7	46	0.6
Max	Plinto Sez. 2 Nodi: 10	39	1.0

Combinazioni FREQUENTI Stati Limite di Esercizio

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 2 Nodi: 7	50	0.7
Max	Plinto Sez. 2 Nodi: 10	51	0.7

Combinazioni QUASI PERMANENTI Stati Limite di Esercizio

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 2 Nodi: 7	55	0.7
Max	Plinto Sez. 2 Nodi: 10	55	0.7

Combinazioni agli Stati Limite di Danno

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 2 Nodi: 7	77	0.8
Max	Plinto Sez. 2 Nodi: 10	64	1.1

Combinazioni agli Stati Limite di Operatività

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 2 Nodi: 7	101	0.8
Max	Plinto Sez. 2 Nodi: 10	88	1.2

PLINTO 120X120

Pressioni massime sul terreno

Combinazioni agli Stati Limite Ultimi

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 4 Nodi: 18	4	0.7
Max	Plinto Sez. 4 Nodi: 24	4	0.8

Combinazioni agli Stati Limite di Salvaguardia della Vita

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 4 Nodi: 19	28	0.4
Max	Plinto Sez. 4 Nodi: 18	19	0.7

Combinazioni RARE Stati Limite di Esercizio

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 4 Nodi: 18	40	0.5
Max	Plinto Sez. 4 Nodi: 21	40	0.6

Combinazioni FREQUENTI Stati Limite di Esercizio

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 4 Nodi: 18	52	0.6
Max	Plinto Sez. 4 Nodi: 21	52	0.6

Combinazioni QUASI PERMANENTI Stati Limite di Esercizio

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 4 Nodi: 18	55	0.6
Max	Plinto Sez. 4 Nodi: 21	55	0.6

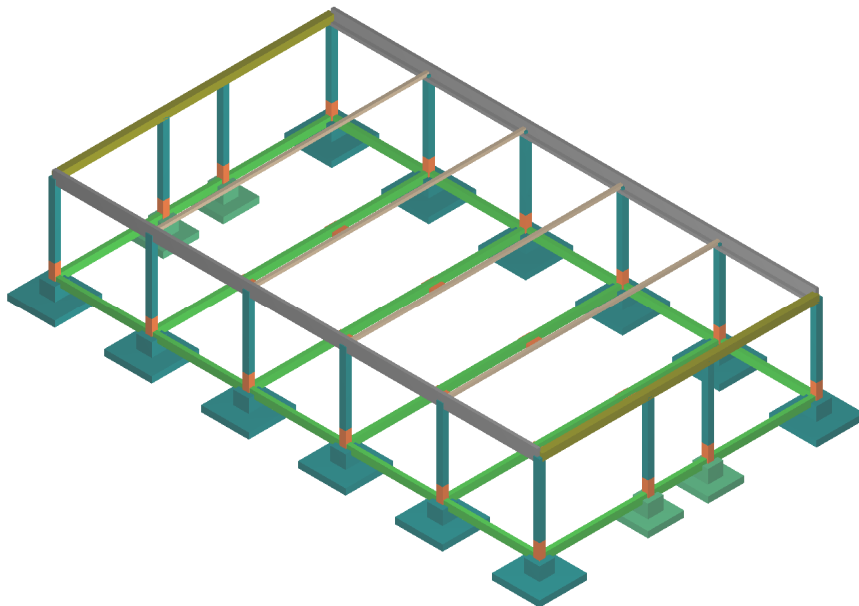
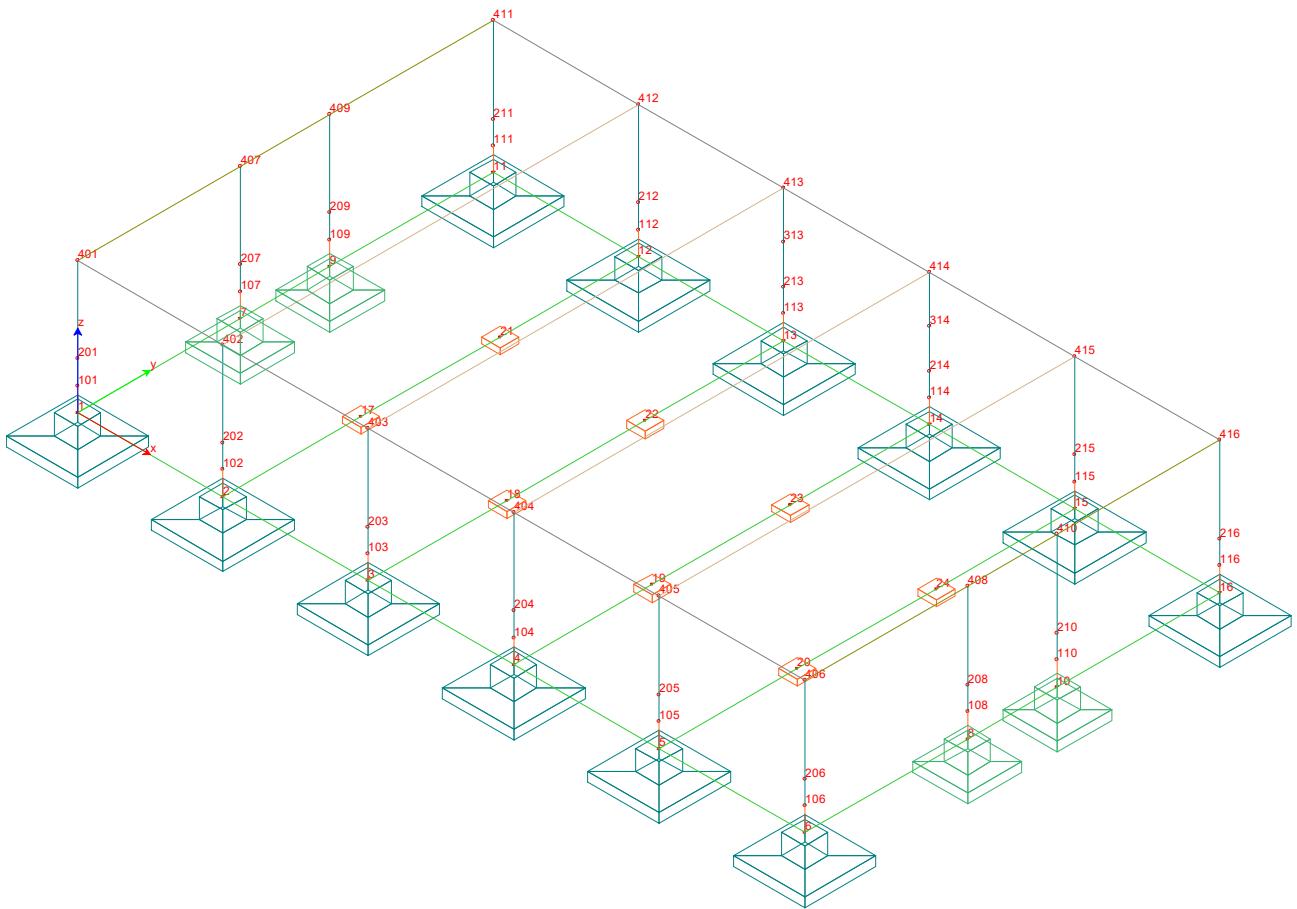
Combinazioni agli Stati Limite di Danno

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 4 Nodi: 19	71	0.5
Max	Plinto Sez. 4 Nodi: 19	60	0.7

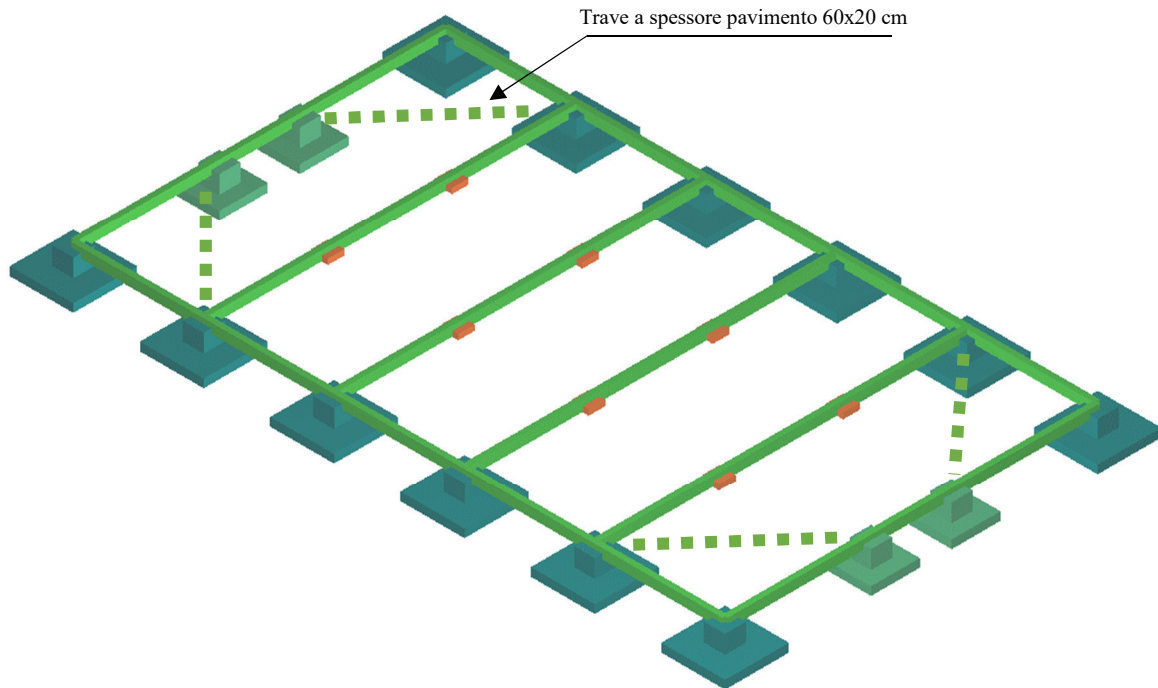
Combinazioni agli Stati Limite di Operatività

	Elemento	Combinazione	P [kg/cm ²]
Min	Plinto Sez. 4 Nodi: 19	95	0.5
Max	Plinto Sez. 4 Nodi: 18	86	0.7

MODELLO STRUTTURALE CAPANNONE



SCHEMA FONDAZIONE



En.Ex.Sys. WinStrand

Structural Analysis & Design

Ditta produttrice:

En.Ex.Sys. s.r.l. - Via Tizzano 46/2 - Casalecchio di Reno (Bologna)

Sigla:

WinStrand

Piattaforma software:

Microsoft Windows XP Home, Microsoft Windows XP Home Professional

Documentazione in uso:

Manuale teorico - Manuale d'uso

Campo di applicazione:

Analisi statica e dinamica di strutture in campo elastico lineare.

Elementi finiti implementati

- Truss.
- Beam (Modellazione di Travi e Pilastrì).
- Travi su suolo elastico alla Winkler.
- Plinti su suolo elastico alla Winkler.
- Elementi Shear Wall per la modellazione di pareti di taglio.
- Elementi shell (lastra/piastra) equivalenti.
- Elementi Isoparametrici a 8 Nodi Shell (lastra/piastra).

Schemi di Carico

- Carichi nodali concentrati.
- Carichi applicati direttamente agli elementi.
- Carichi Superficiali.

Tipo di Risoluzione

- Analisi statica e/o dinamica in campo lineare con il metodo dell'equilibrio.
- Fattorizzazione LDL^T.
- Analisi Statica:
 - modellazione generale 6 gradi di libertà per nodo.
 - ipotesi di solai infinitamente rigidi nel proprio piano (3 gradi di libertà per nodo + 3 per impalcato).
- Analisi dinamica. (Nel caso di analisi modale gli autovettori ed autovalori possono essere calcolati mediante *subspace iteration* oppure tramite il *metodo dei vettori di Ritz*):
 - Via statica equivalente.
 - Modale con il metodo dello spettro di risposta.

Normativa di riferimento

La normativa italiana cui viene fatto riferimento nelle fasi di calcolo e progettazione è la seguente:

- D.M. del 17 Gennaio 2018 "Aggiornamento delle «Norme tecniche per le costruzioni»"
- Circolare del 2 Febbraio 2009, n. 617 "Istruzioni per l'applicazione delle "Norme tecniche per le costruzioni" di cui al D.M. 14 gennaio 2008"
- D.M. del 14 Gennaio 2008 "Approvazione delle nuove norme tecniche per le costruzioni"
- Ordinanza n. 3274 del 20 Marzo 2003. "Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica"
- Ordinanza n. 3316. "Modifiche ed integrazioni all'ordinanza del Presidente del Consiglio dei Ministri n. 3274 del 20 Marzo 2003"
- D.M. del 16 Gennaio 1996. "Norme tecniche relative ai «Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi»".
- D.M. del 16 Gennaio 1996. "Norme tecniche per le costruzioni in zone sismiche"
- D.M. del 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. del 14 Febbraio 1992. "Norme Tecniche per l'esecuzione delle opere in C.A. normale e precompresso e per le strutture metalliche".
- D.M. del 3 Ottobre 1978. "Criteri generali per la verifica della sicurezza delle costruzioni e dei carichi e sovraccarichi".
- D.M. del 3 Marzo 1975. "Disposizioni concernenti l'applicazione delle norme tecniche per le costruzioni in zone sismiche".
- D.M. del 3 Marzo 1975. "Approvazione delle norme tecniche per le costruzioni in zone sismiche".
- Legge n. 64 del 2 Febbraio 1974. "Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche".
- Legge n. 1086 del 5 Novembre 1971. "Norme per la disciplina delle opere di conglomerato cementizio armato, normale e precompresso, ed a struttura metallica".
- Istruzioni per la valutazione delle Azioni sulle Costruzioni. (C.N.R. 10012/85)

Indice

- [Dati relativi ai nodi della struttura](#)
- [Elementi tipo trave](#)
- [Elementi tipo plinto su suolo alla winkler](#)
- [Condizioni e combinazioni di carico](#)
- [Carichi e coppie applicati ai nodi](#)
- [Carichi applicati agli elementi](#)
- [Analisi dinamica](#)
- [Pressioni sul terreno](#)
- [Sollecitazioni nelle travi](#)
- [Sollecitazioni nei plinti](#)

Dati relativi ai nodi della struttura

Convenzioni adottate

La terna di riferimento generale è destrorsa.

I nodi vengono numerati, con riferimento a una sezione orizzontale, da sinistra a destra, dal basso verso l'alto e per quote crescenti.

L'impalcato di appartenenza di un nodo è definito, in generale, dalla prima delle tre cifre che ne definiscono il numero, possono tuttavia presentarsi casi in cui si hanno più di 100 nodi per solaio nel qual caso il solaio di appartenenza è specificato dall'ultimo valore stampato nella riga dei dati relativi al nodo.

La maschera dei vincoli è costituita dai valori 0 e 1. Il valore 1 indica che per il nodo in riferimento il grado di libertà correlativo è soppresso mentre il valore 0 indica che è libero.

Nel caso di edifici civili multipiano l'asse z generale coincide con l'asse verticale rivolto verso l'alto.

Nodi

Nodo	x [m]	y [m]	z [m]	Ux	Uy	Uz	Rx	Ry	Rz	Solaio
1	2.27	0.00	0.00	1	1	0	0	0	1	0
2	11.65	0.00	0.00	1	1	0	0	0	1	0
3	21.03	0.00	0.00	1	1	0	0	0	1	0
4	30.41	0.00	0.00	1	1	0	0	0	1	0
5	39.79	0.00	0.00	1	1	0	0	0	1	0
6	49.17	0.00	0.00	1	1	0	0	0	1	0
7	2.27	10.50	0.00	1	1	0	0	0	1	0
8	49.17	10.50	0.00	1	1	0	0	0	1	0
9	2.27	16.30	0.00	1	1	0	0	0	1	0
10	49.17	16.30	0.00	1	1	0	0	0	1	0
11	2.27	26.80	0.00	1	1	0	0	0	1	0
12	11.65	26.80	0.00	1	1	0	0	0	1	0
13	21.03	26.80	0.00	1	1	0	0	0	1	0
14	30.41	26.80	0.00	1	1	0	0	0	1	0
15	39.79	26.80	0.00	1	1	0	0	0	1	0
16	49.17	26.80	0.00	1	1	0	0	0	1	0
17	11.65	8.93	0.00	1	1	0	0	0	1	0
18	21.03	8.93	0.00	1	1	0	0	0	1	0
19	30.41	8.93	0.00	1	1	0	0	0	1	0
20	39.79	8.93	0.00	1	1	0	0	0	1	0
21	11.65	17.87	0.00	1	1	0	0	0	1	0
22	21.03	17.87	0.00	1	1	0	0	0	1	0
23	30.41	17.87	0.00	1	1	0	0	0	1	0
24	39.79	17.87	0.00	1	1	0	0	0	1	0

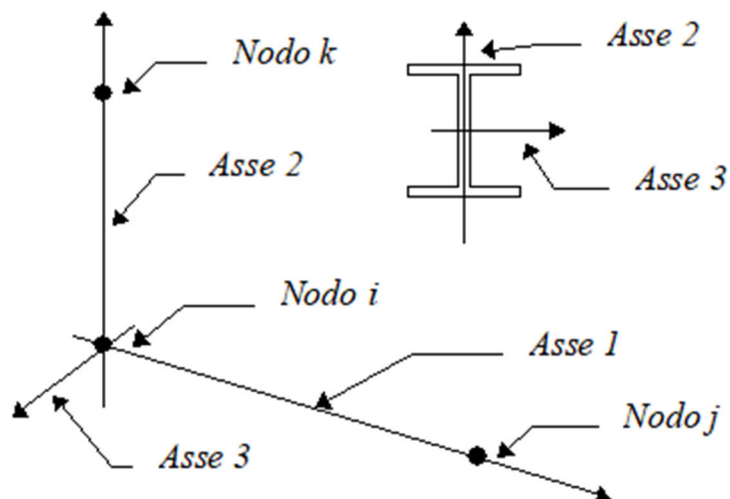
Elementi tipo trave

Convenzioni adottate

Ogni elemento tipo trave viene identificato da:

- Il nodo iniziale **i**;
- Il nodo finale **j**;
- Il nodo **k** che definisce l'orientamento nello spazio della terna riferimento locale dell'elemento.

La terna di riferimento locale della trave risulta essere così disposta:



Vengono riportati i valori di efficacia dei vincoli alle estremità dello elemento (variabili fra 0 e 100%), nei due piani 1-2 e 1-3 della trave in corrispondenza dei nodi, dando quindi la possibilità di considerare aste non perfettamente incastrate (coefficienti **V_{i12}**, **V_{j12}**, **V_{i13}**, **V_{j13}**).

N.B. GLI ELEMENTI "TRAVE" (PREFABBRICATI) SONO CALCOLATI IN SEMPLICE APPOGGIO, DI SEGUITO SONO RIPORTATE LE CARATTERISTICHE GEOMETRICHE AL FINE DEL CALCOLO DEL PESO PROPRIO DELLA STRUTTURA.

Caratteristiche dei Materiali:

Tipo	Modulo Elastico [kg/cm ²]	ν	alfa [1/°C]	Peso Specifico [kg/m ³]	Commento
2	310000.0	0.120	0.000012	2500.0	cls opera

Sezioni Impiegate:

Sezione	Materiale	Tipo di Sezione	Parametri Dimensionali Commenti
4	2	Rett.	B= 40 H= 70 [cm] di collegamento

Caratteristiche Inerziali:

Sezione	Materiale	Area [cm ²]	Jt [cm ⁴]	J2 [cm ⁴]	J3 [cm ⁴]	J23 [cm ⁴]	Xx	Xy
4	2	2800.00	939269	1143333	373333	-0	1.2	1.2

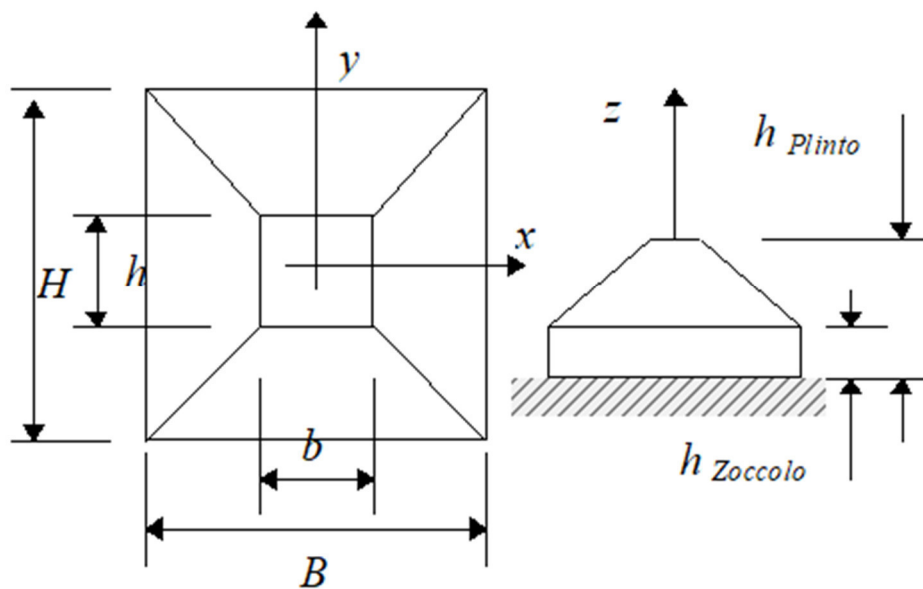
Dal Nodo	Al Nodo	Nodo k	Luce [m]	Materiale	Sezione	Fixity factors								Rigid-end [m]	
						V _{i12}	V _{j12}	V _{i13}	V _{j13}	N _i	N _j	T _i	T _j	d _{ri}	d _{rj}
1	2	10012	9.38	2	4	100	100	100	100	100	100	100	100	0.00	0.00
2	3	10012	9.38	2	4	100	100	100	100	100	100	100	100	0.00	0.00
3	4	10012	9.38	2	4	100	100	100	100	100	100	100	100	0.00	0.00
4	5	10012	9.38	2	4	100	100	100	100	100	100	100	100	0.00	0.00
5	6	10012	9.38	2	4	100	100	100	100	100	100	100	100	0.00	0.00

11	12	10015	9.38	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
12	13	10015	9.38	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
13	14	10015	9.38	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
14	15	10015	9.38	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
15	16	10015	9.38	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
1	7	10016	10.50	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
7	9	10001	5.80	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
9	11	10017	10.50	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
2	17	10009	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
17	21	10009	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
21	12	10009	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
3	18	10007	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
18	22	10007	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
22	13	10007	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
4	19	10005	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
19	23	10005	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
23	14	10005	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
5	20	10003	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
20	24	10003	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
24	15	10003	8.93	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
6	8	10014	10.50	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
8	10	10014	5.80	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00
10	16	10014	10.50	2	4	100	100	100	100	100	100	100	100	100	0.00	0.00

Elementi tipo plinto su suolo alla Winkler

Convenzioni adottate

L'elemento, con riferimento al piano x - y , risulta essere così disposto:



Il plinto viene identificato con il numero del nodo a cui fa capo.

Caratteristiche dei Materiali:

Tipo	Modulo Elastico [kg/cm ²]	ν	alfa [1/°C]	Peso Specifico [kg/m ³]	Commento
1	360000.0	0.160	0.000012	2500.0	Calcestruzzo
2	310000.0	0.120	0.000012	2500.0	cls opera

Numero	k Winkler [kg/cm ³]	E [kg/cm ²]	ν	Commento
1	2.0	50.0	0.20	limi-argilloso sabbiosi mediamente addensati

Sezioni Impiegate:

Sezione	Materiale	Tipo di Sezione	Parametri Dimensionali Commenti
1	2	Plinto a bicchiere	B=460 H=460 b=150 h=150 Hp=190 Hz=60 tb=35 [cm] Terreno numero 1 limi-argilloso sabbiosi mediamente addensati A
2	2	Plinto a bicchiere	B=350 H=350 b=150 h=150 Hp=190 Hz=60 tb=35 [cm] Terreno numero 1 limi-argilloso sabbiosi mediamente addensati B
4	2	Plinto tozzo	B=120 H=120 Hp=40 [cm] Terreno numero 1 limi-argilloso sabbiosi mediamente addensati rompitratta

Nodo Sezione Materiale

1	1	2
2	1	2
3	1	2
4	1	2
5	1	2
6	1	2
7	2	2
8	2	2
9	2	2
10	2	2
11	1	2
12	1	2
13	1	2
14	1	2
15	1	2
16	1	2
17	4	2
18	4	2
19	4	2
20	4	2
21	4	2
22	4	2
23	4	2
24	4	2

Condizioni e combinazioni di carico

Convenzioni adottate

Nel seguito vengono riportate il numero di condizioni di carico statiche e dinamiche che sollecitano la struttura. Si noti che:

- Per quanto riguarda le condizioni di carico dinamiche, il programma assimila ogni direzione di ingresso del sisma, definita dal progettista, ad una condizione di carico. Pertanto qualora agiscano sulla struttura **n** condizioni di carico statiche e il progettista abbia supposto che la struttura venga sollecitata da un sisma entrante in **m** direzioni, la struttura stessa viene considerata del programma come soggetta ad **n + m** condizioni di carico.
- Le combinazioni di carico, definite dal progettista, combinano fra loro le **n + m** condizioni di carico ognuna partecipante alla combinazione **i-esima** secondo i fattori di partecipazione nel seguito riportati. N.B.: se la condizione **j-esima** ha fattore di partecipazione unitario, allora partecipa per intero alla combinazione **i-esima**.
- Le prime **n** condizioni sono sempre statiche mentre sono di origine dinamica le (eventuali) condizioni da **n + 1** a **n + m**.

Condizioni di carico definite:

Condizione

1	peso proprio
2	permanente
3	ecc strutt
4	pannelli appesi
5	massa tamp
6	pannelli a terra
7	Qneve
8	H1 manutenzione
9	Q vento 0°
10	Q vento 90°
11	Q vento 180°
12	Q vento 270°
13	Sisma 0SLU
14	Sisma 90SLU
15	Sisma 180SLU
16	Sisma 270SLU
17	Sisma -1SLU
18	Sisma 0SLD
19	Sisma 90SLD
20	Sisma 180SLD
21	Sisma 270SLD
22	Sisma -1SLD
23	Sisma 0SLO
24	Sisma 90SLO
25	Sisma 180SLO
26	Sisma 270SLO
27	Sisma -1SLO

Combinazioni agli Stati Limite Ultimi

Combinazione di carico numero

1	A1 dom Q vento 0° sec altro
2	A1 dom Q vento 90° sec altro
3	A1 dom Q vento 180° sec altro
4	A1 dom Q vento 270° sec altro
5	A1 dom H1 sec Q vento 0° e altro
6	A1 dom H1 sec Q vento 90° e altro
7	A1 dom H1 sec Q vento 180° e altro
8	A1 dom H1 sec Q vento 270° e altro
9	A1 dom Q neve sec Q vento 0° e altro
10	A1 dom Q neve sec Q vento 90° e altro
11	A1 dom Q neve sec Q vento 180° e altro

Combinazione di carico numero

12	A1 dom Q neve sec Q vento 270° e altro
----	--

Comb.\Cond 1 2 3 4 6 7 8 9 10 11 12

1	1.3	1.3	1.3	1.3	1.3	0.75		1.5			
2	1.3	1.3	1.3	1.3	1.3	0.75			1.5		
3	1.3	1.3	1.3	1.3	1.3	0.75				1.5	
4	1.3	1.3	1.3	1.3	1.3	0.75					1.5
5	1.3	1.3	1.3	1.3	1.3	0.75	1.5	0.9			
6	1.3	1.3	1.3	1.3	1.3	0.75	1.5		0.9		
7	1.3	1.3	1.3	1.3	1.3	0.75	1.5			0.9	
8	1.3	1.3	1.3	1.3	1.3	0.75	1.5				0.9
9	1.3	1.3	1.3	1.3	1.3	1.5		0.9			
10	1.3	1.3	1.3	1.3	1.3	1.5			0.9		
11	1.3	1.3	1.3	1.3	1.3	1.5				0.9	
12	1.3	1.3	1.3	1.3	1.3	1.5					0.9

Combinazioni agli Stati Limite di Salvaguardia della Vita

Combinazione di carico numero

13	Sisma 0 / 90 -1
14	Sisma 0 / 90 -1
15	Sisma 0 / 270 -1
16	Sisma 0 / 270 -1
17	Sisma 90 / 0 -1
18	Sisma 90 / 0 -1
19	Sisma 90 / 180 -1
20	Sisma 90 / 180 -1
21	Sisma 180 / 90 -1
22	Sisma 180 / 90 -1
23	Sisma 180 / 270 -1
24	Sisma 180 / 270 -1
25	Sisma 270 / 0 -1
26	Sisma 270 / 0 -1
27	Sisma 270 / 180 -1
28	Sisma 270 / 180 -1
29	Sisma V. / 0 90
30	Sisma V. / 0 90
31	Sisma V. / 0 270
32	Sisma V. / 0 270
33	Sisma V. / 90 180
34	Sisma V. / 90 180
35	Sisma V. / 180 270
36	Sisma V. / 180 270

Comb.\Cond 1 2 3 4 6 13 14 15 16 17

13	1	1	1	1	1	1	0.3			0.3
14	1	1	1	1	1	1	0.3			-0.3
15	1	1	1	1	1	1			0.3	0.3
16	1	1	1	1	1	1			0.3	-0.3
17	1	1	1	1	1	0.3	1			0.3

18	1	1	1	1	1	0.3	1			-0.3
19	1	1	1	1	1		1	0.3		0.3
20	1	1	1	1	1		1	0.3		-0.3
21	1	1	1	1	1		0.3	1		0.3
22	1	1	1	1	1		0.3	1		-0.3
23	1	1	1	1	1			1	0.3	0.3
24	1	1	1	1	1			1	0.3	-0.3
25	1	1	1	1	1	0.3			1	0.3
26	1	1	1	1	1	0.3			1	-0.3
27	1	1	1	1	1			0.3	1	0.3
28	1	1	1	1	1			0.3	1	-0.3
29	1	1	1	1	1	0.3	0.3			1
30	1	1	1	1	1	0.3	0.3			-1
31	1	1	1	1	1	0.3			0.3	1
32	1	1	1	1	1	0.3			0.3	-1
33	1	1	1	1	1		0.3	0.3		1
34	1	1	1	1	1		0.3	0.3		-1
35	1	1	1	1	1			0.3	0.3	1
36	1	1	1	1	1			0.3	0.3	-1

Combinazioni RARE Stati Limite di Esercizio

Combinazione di carico numero

37	dom Q vento 0° sec altro
38	dom Q vento 90° sec altro
39	dom Q vento 180° sec altro
40	dom Q vento 270° sec altro
41	dom H1 sec Q vento 0° e altro
42	dom H1 sec Q vento 90° e altro
43	dom H1 sec Q vento 180° e altro
44	dom H1 sec Q vento 270° e altro
45	dom Q neve sec Q vento 0° e altro
46	dom Q neve sec Q vento 90° e altro
47	dom Q neve sec Q vento 180° e altro
48	dom Q neve sec Q vento 270° e altro

Comb.\Cond 1 2 3 4 6 7 8 9 10 11 12

37	1	1	1	1	1	0.5		1			
38	1	1	1	1	1	0.5			1		
39	1	1	1	1	1	0.5				1	
40	1	1	1	1	1	0.5					1
41	1	1	1	1	1	0.5	1	0.6			
42	1	1	1	1	1	0.5	1		0.6		
43	1	1	1	1	1	0.5	1			0.6	
44	1	1	1	1	1	0.5	1				0.6
45	1	1	1	1	1	1		0.6			
46	1	1	1	1	1	1			0.6		
47	1	1	1	1	1	1				0.6	
48	1	1	1	1	1	1					0.6

Combinazioni FREQUENTI Stati Limite di Esercizio

Combinazione di carico numero

49	dom Q vento 0° sec altro
50	dom Q vento 90° sec altro
51	dom Q vento 180° sec altro
52	dom Q vento 270° sec altro
53	dom H1 sec Q vento e altro
54	dom Q neve sec Q vento e altro

Comb.\Cond 1 2 3 4 6 7 9 10 11 12

49	1	1	1	1	1	0.2					
50	1	1	1	1	1		0.2				
51	1	1	1	1	1			0.2			
52	1	1	1	1	1				0.2		
53	1	1	1	1	1						
54	1	1	1	1	1	0.2					

Combinazioni QUASI PERMANENTI Stati Limite di Esercizio

Combinazione di carico numero

55	SLE QP
----	--------

Comb.\Cond 1 2 3 4 6

55	1	1	1	1	1
----	---	---	---	---	---

Combinazioni agli Stati Limite di Danno

Combinazione di carico numero

56	Sisma 0 / 90 -1
57	Sisma 0 / 90 -1
58	Sisma 0 / 270 -1
59	Sisma 0 / 270 -1
60	Sisma 90 / 0 -1
61	Sisma 90 / 0 -1
62	Sisma 90 / 180 -1
63	Sisma 90 / 180 -1
64	Sisma 180 / 90 -1
65	Sisma 180 / 90 -1
66	Sisma 180 / 270 -1
67	Sisma 180 / 270 -1
68	Sisma 270 / 0 -1
69	Sisma 270 / 0 -1
70	Sisma 270 / 180 -1
71	Sisma 270 / 180 -1
72	Sisma V. / 0 90
73	Sisma V. / 0 90
74	Sisma V. / 0 270
75	Sisma V. / 0 270

Combinazione di carico numero

76	Sisma V. / 90 180
77	Sisma V. / 90 180
78	Sisma V. / 180 270
79	Sisma V. / 180 270

Comb.\Cond 1 2 3 4 6 18 19 20 21 22

56	1	1	1	1	1	1	0.3			0.3
57	1	1	1	1	1	1	0.3			-0.3
58	1	1	1	1	1	1			0.3	0.3
59	1	1	1	1	1	1			0.3	-0.3
60	1	1	1	1	1	0.3	1			0.3
61	1	1	1	1	1	0.3	1			-0.3
62	1	1	1	1	1		1	0.3		0.3
63	1	1	1	1	1		1	0.3		-0.3
64	1	1	1	1	1		0.3	1		0.3
65	1	1	1	1	1		0.3	1		-0.3
66	1	1	1	1	1			1	0.3	0.3
67	1	1	1	1	1			1	0.3	-0.3
68	1	1	1	1	1	0.3			1	0.3
69	1	1	1	1	1	0.3			1	-0.3
70	1	1	1	1	1			0.3	1	0.3
71	1	1	1	1	1			0.3	1	-0.3
72	1	1	1	1	1	0.3	0.3			1
73	1	1	1	1	1	0.3	0.3			-1
74	1	1	1	1	1	0.3			0.3	1
75	1	1	1	1	1	0.3			0.3	-1
76	1	1	1	1	1		0.3	0.3		1
77	1	1	1	1	1		0.3	0.3		-1
78	1	1	1	1	1			0.3	0.3	1
79	1	1	1	1	1			0.3	0.3	-1

Combinazioni agli Stati Limite di Operatività

Combinazione di carico numero

80	Sisma 0 / 90 -1
81	Sisma 0 / 90 -1
82	Sisma 0 / 270 -1
83	Sisma 0 / 270 -1
84	Sisma 90 / 0 -1
85	Sisma 90 / 0 -1
86	Sisma 90 / 180 -1
87	Sisma 90 / 180 -1
88	Sisma 180 / 90 -1
89	Sisma 180 / 90 -1
90	Sisma 180 / 270 -1
91	Sisma 180 / 270 -1
92	Sisma 270 / 0 -1
93	Sisma 270 / 0 -1
94	Sisma 270 / 180 -1
95	Sisma 270 / 180 -1
96	Sisma V. / 0 90
97	Sisma V. / 0 90

Combinazione di carico numero

98	Sisma V. / 0 270
99	Sisma V. / 0 270
100	Sisma V. / 90 180
101	Sisma V. / 90 180
102	Sisma V. / 180 270
103	Sisma V. / 180 270

Comb.\Cond 1 2 3 4 6 23 24 25 26 27

80	1	1	1	1	1	1	0.3			0.3
81	1	1	1	1	1	1	0.3			-0.3
82	1	1	1	1	1	1			0.3	0.3
83	1	1	1	1	1	1			0.3	-0.3
84	1	1	1	1	1	0.3	1			0.3
85	1	1	1	1	1	0.3	1			-0.3
86	1	1	1	1	1		1	0.3		0.3
87	1	1	1	1	1		1	0.3		-0.3
88	1	1	1	1	1		0.3	1		0.3
89	1	1	1	1	1		0.3	1		-0.3
90	1	1	1	1	1			1	0.3	0.3
91	1	1	1	1	1			1	0.3	-0.3
92	1	1	1	1	1	0.3			1	0.3
93	1	1	1	1	1	0.3			1	-0.3
94	1	1	1	1	1			0.3	1	0.3
95	1	1	1	1	1			0.3	1	-0.3
96	1	1	1	1	1	0.3	0.3			1
97	1	1	1	1	1	0.3	0.3			-1
98	1	1	1	1	1	0.3			0.3	1
99	1	1	1	1	1	0.3			0.3	-1
100	1	1	1	1	1		0.3	0.3		1
101	1	1	1	1	1		0.3	0.3		-1
102	1	1	1	1	1			0.3	0.3	1
103	1	1	1	1	1			0.3	0.3	-1

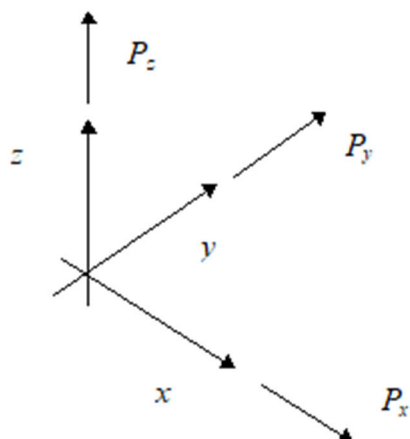
Tabella delle combinazioni di carico presentate come involuppi

Commento	Sigla	Combinazioni utilizzate																																				
	Combinazione																																					
SLU Statiche	SLU Statiche +-	1	2	3	4	5	6	7	8	9	10	11	12																									
SLV	SLV +-	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36													
SLE Rare	SLE Rare +-	37	38	39	40	41	42	43	44	45	46	47	48																									
SLE Frequenti	SLE Frequenti +-	49	50	51	52	53	54																															
SLE Quasi Permanenti	SLE Quasi Permanenti +-	55																																				
SLD	SLD +-	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79													
SLO	SLO +-	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103													

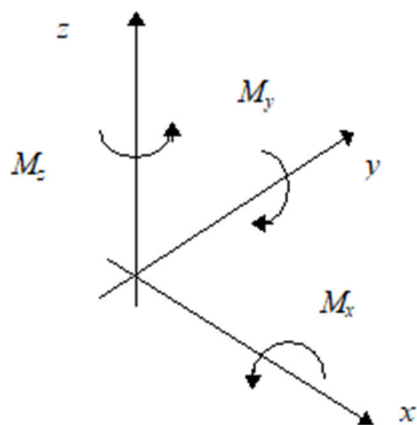
Carichi e coppie applicati ai nodi

Convenzioni adottate

La terna di riferimento generale è destrorsa per cui si hanno i seguenti segni positivi per i carichi o per le coppie direttamente applicati ai nodi:



Versi positivi delle forze concentrate applicate ai nodi.



Versi positivi delle coppie concentrate applicate ai nodi.

Nel seguito vengono riportati per ogni nodo, su cui agiscono carichi concentrati, le componenti del carico (P_x , P_y , P_z , M_x , M_y , M_z) e la condizione di carico cui esse fanno riferimento.

Nodo	Cond.	P_x [kg]	P_y [kg]	P_z [kg]	M_x [kgm]	M_y [kgm]	M_z [kgm]
------	-------	---------------	---------------	---------------	----------------	----------------	----------------

1	6	0.0	0.0	-37573.2	0.0	0.0	0.0
2	6	0.0	0.0	-35456.4	0.0	0.0	0.0
3	6	0.0	0.0	-35456.4	0.0	0.0	0.0
4	6	0.0	0.0	-35456.4	0.0	0.0	0.0
5	6	0.0	0.0	-35456.4	0.0	0.0	0.0
6	6	0.0	0.0	-37573.2	0.0	0.0	0.0
7	6	0.0	0.0	-30807.0	0.0	0.0	0.0
8	6	0.0	0.0	-30807.0	0.0	0.0	0.0
9	6	0.0	0.0	-30807.0	0.0	0.0	0.0
10	6	0.0	0.0	-30807.0	0.0	0.0	0.0
11	6	0.0	0.0	-37573.2	0.0	0.0	0.0
12	6	0.0	0.0	-35728.2	0.0	0.0	0.0
13	6	0.0	0.0	-24000.0	0.0	0.0	0.0
14	6	0.0	0.0	-24000.0	0.0	0.0	0.0
15	6	0.0	0.0	-35728.2	0.0	0.0	0.0
16	6	0.0	0.0	-37573.2	0.0	0.0	0.0

Carichi applicati agli elementi

Convenzioni adottate

I carichi applicati vengono raccolti nella tabella riportata alla fine del paragrafo e si intendono applicati nel sistema di riferimento locale dell'elemento.

Per la lettura della tabella si definiscono:

NodoI, NodoJ
I nodi iniziale/finale dell'asta o lato dell'elemento cui afferisce il carico
L
La distanza fra i suddetti nodi.
qxi, ..., qxj
Le componenti di un carico distribuito costante o variabile linearmente iniziali (indice i) e finale (indice j).
xi, xj
Le distanze, misurate a partire dal NodoI, dei punti di applicazione dei carichi qxi..qxj relativi a carichi distribuiti applicati su porzioni di un'asta.
Px, ..., Pz xApp
Le componenti di un Carico Concentrato applicato a distanza xApp dal NodoI.
Mx, ..., Mz xApp
Le componenti di una Coppia Concentrata applicata a distanza xApp dal NodoI.
Var Termica Assiale, ..., Var Termica Farfalla 13
Le variazioni termiche (Assiali ed a Farfalla) misurate in gradi Celsius.
mxi, ..., mxj
Le componenti di coppie distribuite costanti o variabili linearmente iniziali (indice i) e finale (indice j).
qSx, qSy, qSz
carichi, per unità di superficie, applicati su elementi superficiali o facce di elementi solidi
Peso Proprio
Il valore del carico derivante dal peso proprio dell'elemento

Carichi distribuiti

Nodo I	Nodo J	L [m]	Condizione di carico	xi [m]	qxi [kg/m]	qyi [kg/m]	qzi [kg/m]	xj [m]	qxj [kg/m]	qyj [kg/m]	qzj [kg/m]
1	2	9.38	1	0.00	0.0	700.0	0.0	9.38	0.0	700.0	0.0
2	3	9.38	1	0.00	0.0	700.0	0.0	9.38	0.0	700.0	0.0
3	4	9.38	1	0.00	0.0	700.0	0.0	9.38	0.0	700.0	0.0
4	5	9.38	1	0.00	0.0	700.0	0.0	9.38	0.0	700.0	0.0
5	6	9.38	1	0.00	0.0	700.0	0.0	9.38	0.0	700.0	0.0
11	12	9.38	1	0.00	0.0	700.0	0.0	9.38	0.0	700.0	0.0
12	13	9.38	1	0.00	0.0	700.0	0.0	9.38	0.0	700.0	0.0
13	14	9.38	1	0.00	0.0	700.0	0.0	9.38	0.0	700.0	0.0
14	15	9.38	1	0.00	0.0	700.0	0.0	9.38	0.0	700.0	0.0
15	16	9.38	1	0.00	0.0	700.0	0.0	9.38	0.0	700.0	0.0
1	7	10.50	1	0.00	0.0	700.0	0.0	10.50	0.0	700.0	0.0
7	9	5.80	1	0.00	0.0	700.0	0.0	5.80	0.0	700.0	0.0
9	11	10.50	1	0.00	0.0	700.0	0.0	10.50	0.0	700.0	0.0
2	17	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
17	21	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
21	12	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
3	18	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
18	22	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
22	13	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
4	19	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
19	23	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
23	14	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0

5	20	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
20	24	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
24	15	8.93	1	0.00	0.0	700.0	0.0	8.93	0.0	700.0	0.0
6	8	10.50	1	0.00	0.0	700.0	0.0	10.50	0.0	700.0	0.0
8	10	5.80	1	0.00	0.0	700.0	0.0	5.80	0.0	700.0	0.0
10	16	10.50	1	0.00	0.0	700.0	0.0	10.50	0.0	700.0	0.0

Analisi dinamica

Convenzioni adottate

Nella presente versione del programma *WinStrand* l'analisi in campo dinamico della struttura può essere condotta per via *statica equivalente* ovvero per via *modale* facendo uso, per il calcolo della risposta, dello spettro di pseudo accelerazioni fornito dal regolamento italiano.

Dati generali relativi all'analisi dinamica

Spettro in accordo con TU 2018

- Montesilvano PE Longitudine 14.1427 Latitudine 42.5076
- Tipo di Terreno C
- Coefficiente di amplificazione topografica (S_T) 1.0000
- Vita nominale della costruzione (V_N) 50.0 anni
- Classe d'uso III coefficiente C_U 1.5
- Classe di duttilità impostata Bassa
- Fattore di duttilità α_u/α_1 per sisma orizzontale 1.00
- Fattore riduttivo regolarità in altezza K_R 1.00
- Fattore riduttivo per la presenza di setti K_W 1.00

Stato C
Limite $q_0 = C \alpha_u/\alpha_1$ q_H q_V

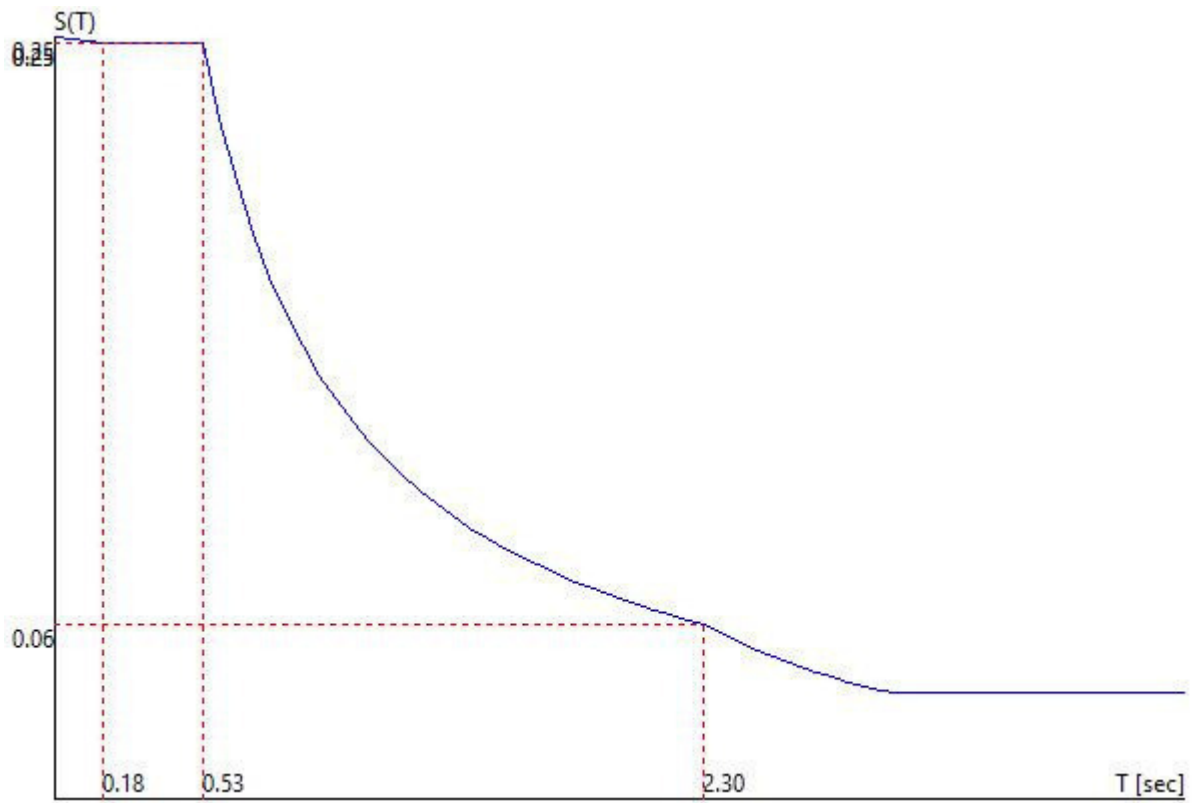
SLV	2.50	2.50	1.50
SLD	1.50	1.50	1.50
SLC	2.50	2.50	1.50
SLO	1.00	1.00	1.50

- Smorzamento Viscoso (0.05 = 5%) 0.05

TU 2018 SLV H

- Probabilità di superamento (P_{VR}) 10.0 e periodo di ritorno (T_R) 712 (anni)
- S_s 1.441
- T_B 0.18 [sec]
- T_C 0.53 [sec]
- T_D 2.30 [sec]
- a_g/g 0.1744
- F_0 2.4765
- T_C^* 0.3574

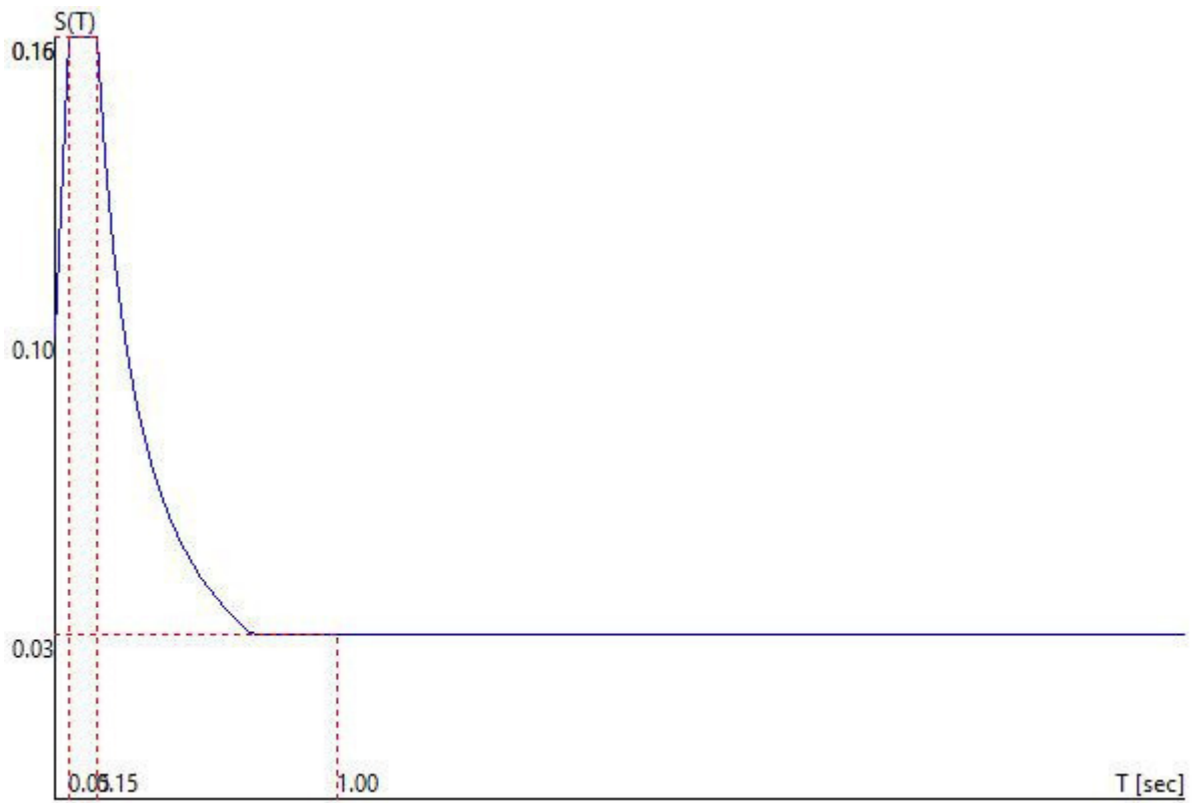
TU 2018 SLV H



TU 2018 SLV V

- Probabilità di superamento (P_{VS}) 10.0 e periodo di ritorno (T_R) 712 (anni)
- S_s 1.000
- T_B 0.05 [sec]
- T_C 0.15 [sec]
- T_D 1.00 [sec]
- a_g/g 0.1744
- F_v 1.3962
- T_C^* 0.3574

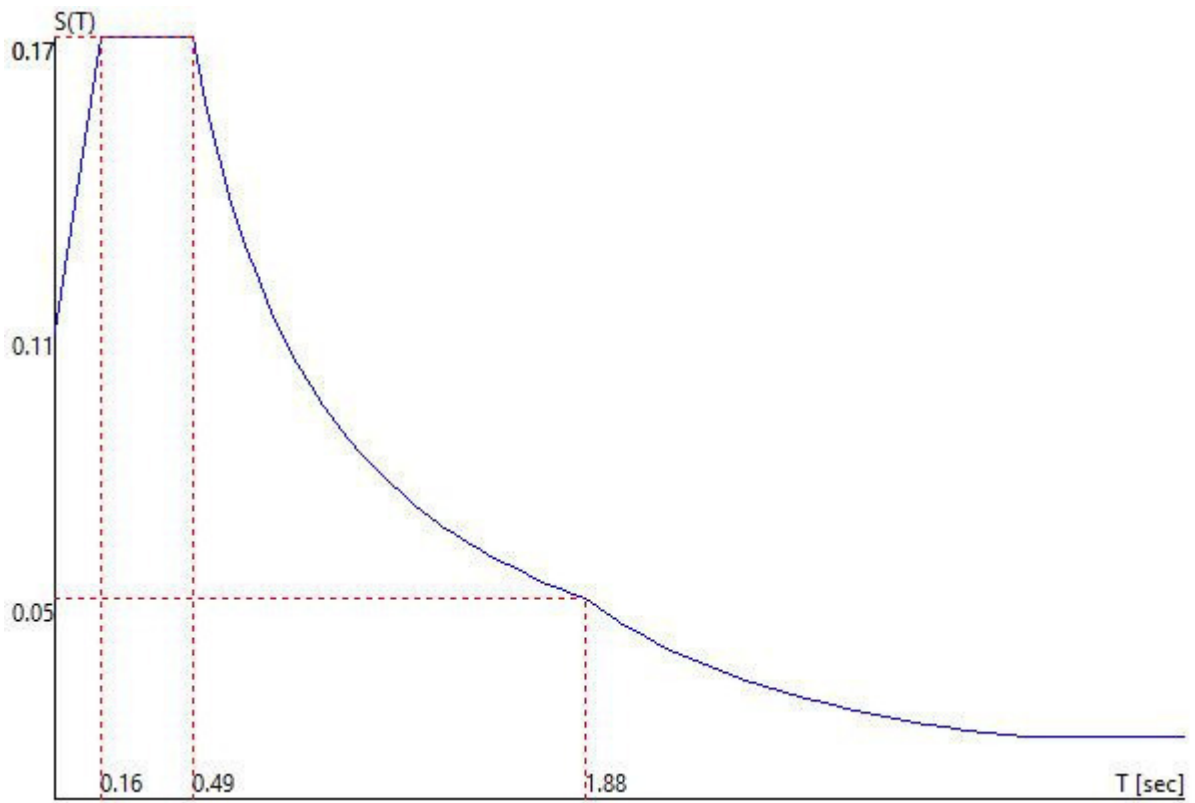
TU 2018 SLV V



TU 2018 SLD H

- Probabilità di superamento (P_{VS}) 63.0 e periodo di ritorno (T_R) 75 (anni)
- S_s 1.500
- T_B 0.16 [sec]
- T_C 0.49 [sec]
- T_D 1.88 [sec]
- a_g/g 0.0705
- F_o 2.4555
- T_C^* 0.3214

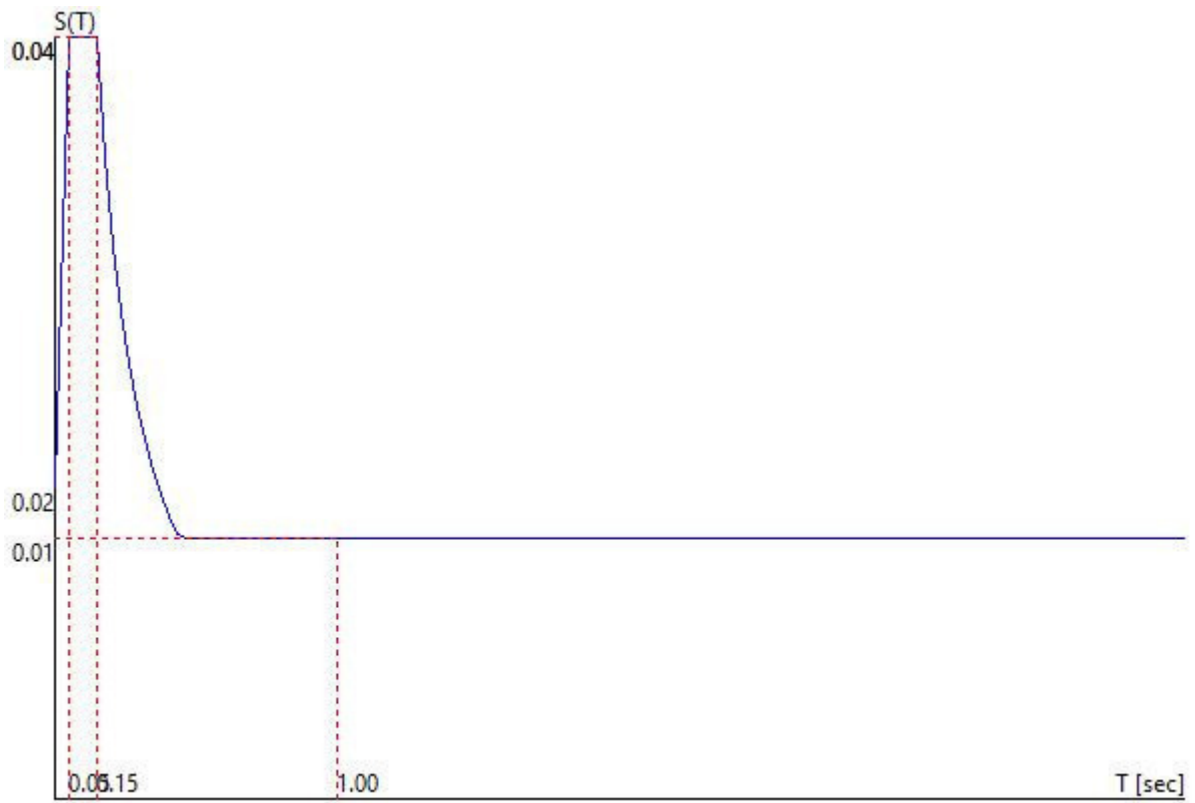
TU 2018 SLD H



TU 2018 SLD V

- Probabilità di superamento (P_{VS}) 63.0 e periodo di ritorno (T_R) 75 (anni)
- S_s 1.000
- T_B 0.05 [sec]
- T_C 0.15 [sec]
- T_D 1.00 [sec]
- a_g/g 0.0705
- F_v 0.8803
- T_C^* 0.3214

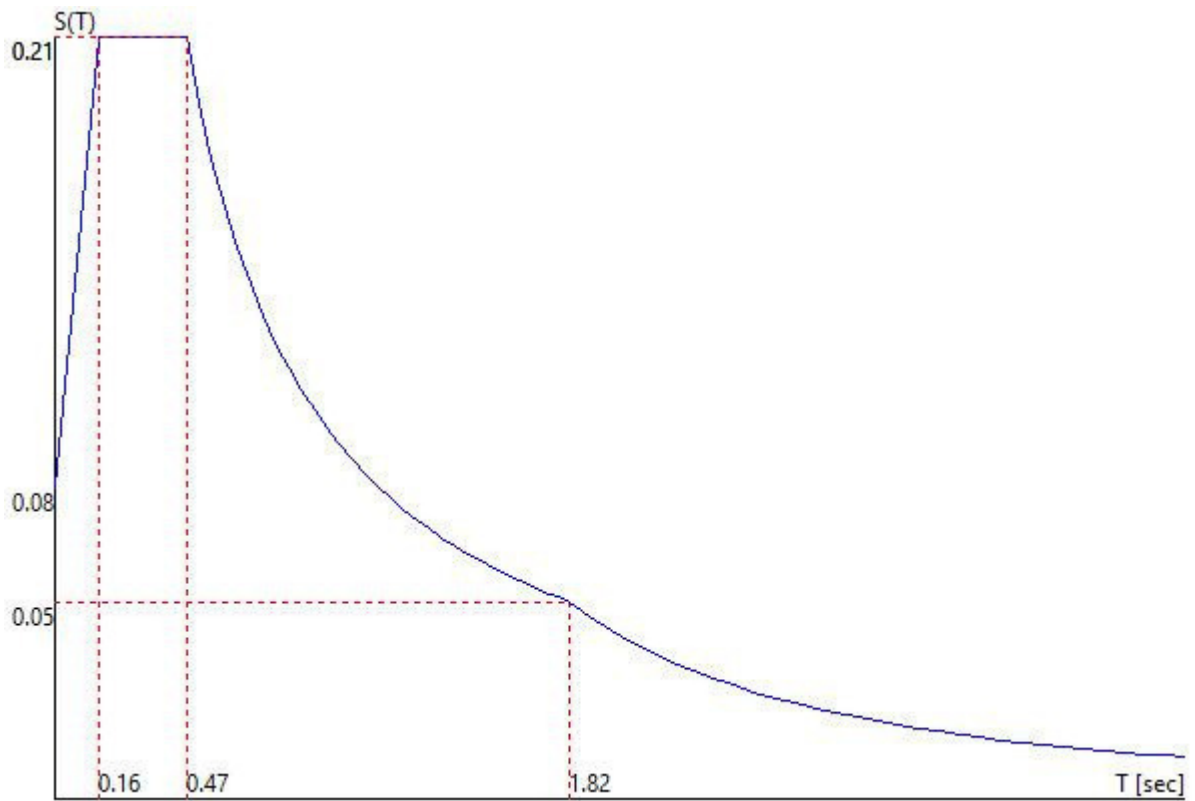
TU 2018 SLD V



TU 2018 SLO H

- Probabilità di superamento (P_{VR}) 81.0 e periodo di ritorno (T_R) 45 (anni)
- S_s 1.500
- T_B 0.16 [sec]
- T_C 0.47 [sec]
- T_D 1.82 [sec]
- a_g/g 0.0561
- F_o 2.4611
- T_C^* 0.2999

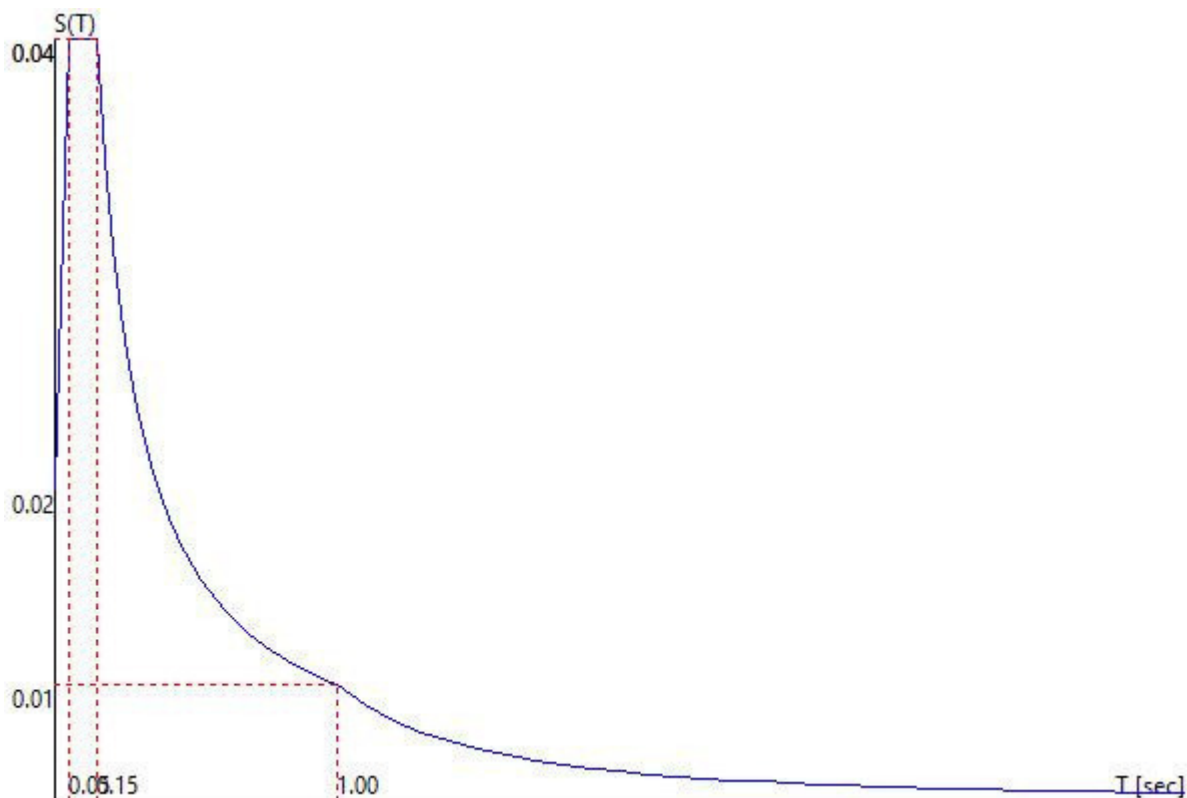
TU 2018 SLO H



TU 2018 SLO V

- Probabilità di superamento (P_{VS}) 81.0 e periodo di ritorno (T_R) 45 (anni)
- S_s 1.000
- T_B 0.05 [sec]
- T_C 0.15 [sec]
- T_D 1.00 [sec]
- a_g/g 0.0561
- F_v 0.7871
- T_C^* 0.2999

TU 2018 SLO V



Fattori di partecipazione per il calcolo delle masse

Cond. Carico 1 peso proprio 1.0000
 Cond. Carico 2 permanente 1.0000
 Cond. Carico 3 ecc strutt 0.0000
 Cond. Carico 4 pannelli appesi 1.0000
 Cond. Carico 5 massa tamp 1.0000
 Cond. Carico 6 pannelli a terra 0.0000
 Cond. Carico 7 Qneve 0.0000
 Cond. Carico 8 H1 manutenzione 0.0000
 Cond. Carico 9 Q vento 0° 0.0000
 Cond. Carico 10 Q vento 90° 0.0000
 Cond. Carico 11 Q vento 180° 0.0000
 Cond. Carico 12 Q vento 270° 0.0000

Angoli d'ingresso del Sisma

- SLV Direzione 1 Angolo in pianta 0.00 [°]
- SLV Direzione 2 Angolo in pianta 90.00 [°]
- SLV Direzione 3 Angolo in pianta 180.00 [°]
- SLV Direzione 4 Angolo in pianta 270.00 [°]
- SLV Direzione 5 Sisma Verticale
- SLD Direzione 6 Angolo in pianta 0.00 [°]
- SLD Direzione 7 Angolo in pianta 90.00 [°]
- SLD Direzione 8 Angolo in pianta 180.00 [°]
- SLD Direzione 9 Angolo in pianta 270.00 [°]
- SLD Direzione 10 Sisma Verticale
- SLO Direzione 11 Angolo in pianta 0.00 [°]
- SLO Direzione 12 Angolo in pianta 90.00 [°]
- SLO Direzione 13 Angolo in pianta 180.00 [°]
- SLO Direzione 14 Angolo in pianta 270.00 [°]
- SLO Direzione 15 Sisma Verticale

Direzione d'ingresso 1 angolo 0.00 [°] SLV

Primi autovalori e modi di vibrare della struttura.

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
1	1.64487e+01	4.056	1.55	0.0847
2	1.69490e+01	4.117	1.53	0.0859
3	1.74862e+01	4.182	1.50	0.0873
4	1.78295e+01	4.222	1.49	0.0882
5	1.91168e+01	4.372	1.44	0.0913
6	1.92644e+01	4.389	1.43	0.0916
7	3.67636e+01	6.063	1.04	0.1266
8	4.31208e+01	6.567	0.96	0.1371
9	5.34444e+01	7.311	0.86	0.1526
10	6.28941e+01	7.931	0.79	0.1656
11	2.44462e+03	49.443	0.13	0.2496
12	3.31136e+03	57.544	0.11	0.2498
13	3.58109e+03	59.842	0.10	0.2499
14	4.13290e+03	64.288	0.10	0.2500
15	3.16436e+04	177.886	0.04	0.2508
16	1.38529e+05	372.195	0.02	0.2511

Direzione d'ingresso 2 angolo 90.00 [°] SLV

Primi autovalori e modi di vibrare della struttura.

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
1	1.64487e+01	4.056	1.55	0.0847
2	1.69490e+01	4.117	1.53	0.0859
3	1.74862e+01	4.182	1.50	0.0873
4	1.78295e+01	4.222	1.49	0.0882
5	1.91168e+01	4.372	1.44	0.0913
6	1.92644e+01	4.389	1.43	0.0916
7	3.67636e+01	6.063	1.04	0.1266
8	3.67636e+01	6.063	1.04	0.1266
9	5.34444e+01	7.311	0.86	0.1526
10	6.28829e+01	7.930	0.79	0.1656
11	1.57199e+03	39.648	0.16	0.2492
12	2.65008e+03	51.479	0.12	0.2496
13	3.82891e+03	61.878	0.10	0.2499
14	4.45504e+03	66.746	0.09	0.2500
15	9.62968e+03	98.131	0.06	0.2504
16	8.25843e+04	287.375	0.02	0.2510

Direzione d'ingresso 3 angolo 180.00 [°] SLV**Primi autovalori e modi di vibrare della struttura.**

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
1	1.64487e+01	4.056	1.55	0.0847
2	1.69490e+01	4.117	1.53	0.0859
3	1.74862e+01	4.182	1.50	0.0873
4	1.78295e+01	4.222	1.49	0.0882
5	1.91168e+01	4.372	1.44	0.0913
6	1.92644e+01	4.389	1.43	0.0916
7	3.67636e+01	6.063	1.04	0.1266
8	4.20298e+01	6.483	0.97	0.1353
9	5.34444e+01	7.311	0.86	0.1526
10	6.28941e+01	7.931	0.79	0.1656
11	2.44350e+03	49.432	0.13	0.2496
12	3.30984e+03	57.531	0.11	0.2498
13	3.57997e+03	59.833	0.11	0.2499
14	4.13276e+03	64.287	0.10	0.2500
15	3.16138e+04	177.803	0.04	0.2508
16	1.38324e+05	371.919	0.02	0.2511

Direzione d'ingresso 4 angolo 270.00 [°] SLV**Primi autovalori e modi di vibrare della struttura.**

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
1	1.64487e+01	4.056	1.55	0.0847
2	1.69490e+01	4.117	1.53	0.0859
3	1.74862e+01	4.182	1.50	0.0873
4	1.78295e+01	4.222	1.49	0.0882
5	1.91168e+01	4.372	1.44	0.0913
6	1.92644e+01	4.389	1.43	0.0916
7	3.67636e+01	6.063	1.04	0.1266
8	3.67636e+01	6.063	1.04	0.1266
9	5.34444e+01	7.311	0.86	0.1526
10	6.28829e+01	7.930	0.79	0.1656
11	1.57199e+03	39.648	0.16	0.2492
12	2.65008e+03	51.479	0.12	0.2496
13	3.82891e+03	61.878	0.10	0.2499
14	4.45504e+03	66.746	0.09	0.2500
15	9.62968e+03	98.131	0.06	0.2504
16	8.25843e+04	287.375	0.02	0.2510

Direzione d'ingresso 5 Sisma Verticale SLV V.**Primi autovalori e modi di vibrare della struttura.**

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
1	1.64487e+01	4.056	1.55	0.0349
2	1.69575e+01	4.118	1.53	0.0349
3	1.74862e+01	4.182	1.50	0.0349
4	1.78300e+01	4.223	1.49	0.0349

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
------	------------	------------------------	------------------	--------------------------

5	1.91168e+01	4.372	1.44	0.0349
6	1.92644e+01	4.389	1.43	0.0349
7	3.67636e+01	6.063	1.04	0.0349
8	5.34289e+01	7.310	0.86	0.0349
9	6.28829e+01	7.930	0.79	0.0349
10	2.36751e+03	48.657	0.13	0.1623
11	2.41948e+03	49.188	0.13	0.1623
12	3.02536e+03	55.003	0.11	0.1623
13	3.48059e+03	58.997	0.11	0.1623
14	4.09703e+03	64.008	0.10	0.1623
15	2.26127e+04	150.375	0.04	0.1518
16	5.01607e+04	223.966	0.03	0.1342

Direzione d'ingresso 6 angolo 0.00 [°] SLD

Primi autovalori e modi di vibrare della struttura.

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
------	------------	------------------------	------------------	--------------------------

1	1.64487e+01	4.056	1.55	0.0549
2	1.69490e+01	4.117	1.53	0.0557
3	1.74862e+01	4.182	1.50	0.0566
4	1.78295e+01	4.222	1.49	0.0571
5	1.91168e+01	4.372	1.44	0.0591
6	1.92644e+01	4.389	1.43	0.0594
7	3.67636e+01	6.063	1.04	0.0820
8	4.31208e+01	6.567	0.96	0.0888
9	5.34444e+01	7.311	0.86	0.0989
10	6.28941e+01	7.931	0.79	0.1073
11	2.44462e+03	49.443	0.13	0.1581
12	3.31136e+03	57.544	0.11	0.1508
13	3.58109e+03	59.842	0.10	0.1490
14	4.13290e+03	64.288	0.10	0.1461
15	3.16436e+04	177.886	0.04	0.1203
16	1.38529e+05	372.195	0.02	0.1127

Direzione d'ingresso 7 angolo 90.00 [°] SLD

Primi autovalori e modi di vibrare della struttura.

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
------	------------	------------------------	------------------	--------------------------

1	1.64487e+01	4.056	1.55	0.0549
2	1.69490e+01	4.117	1.53	0.0557
3	1.74862e+01	4.182	1.50	0.0566
4	1.78295e+01	4.222	1.49	0.0571
5	1.91168e+01	4.372	1.44	0.0591
6	1.92644e+01	4.389	1.43	0.0594
7	3.67636e+01	6.063	1.04	0.0820
8	3.67636e+01	6.063	1.04	0.0820
9	5.34444e+01	7.311	0.86	0.0989
10	6.28829e+01	7.930	0.79	0.1073
11	1.57199e+03	39.648	0.16	0.1711

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
------	------------	------------------------	------------------	--------------------------

12	2.65008e+03	51.479	0.12	0.1561
13	3.82891e+03	61.878	0.10	0.1476
14	4.45504e+03	66.746	0.09	0.1446
15	9.62968e+03	98.131	0.06	0.1322
16	8.25843e+04	287.375	0.02	0.1148

Direzione d'ingresso 8 angolo 180.00 [°] SLD

Primi autovalori e modi di vibrare della struttura.

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
------	------------	------------------------	------------------	--------------------------

1	1.64487e+01	4.056	1.55	0.0549
2	1.69490e+01	4.117	1.53	0.0557
3	1.74862e+01	4.182	1.50	0.0566
4	1.78295e+01	4.222	1.49	0.0571
5	1.91168e+01	4.372	1.44	0.0591
6	1.92644e+01	4.389	1.43	0.0594
7	3.67636e+01	6.063	1.04	0.0820
8	4.20298e+01	6.483	0.97	0.0877
9	5.34444e+01	7.311	0.86	0.0989
10	6.28941e+01	7.931	0.79	0.1073
11	2.44350e+03	49.432	0.13	0.1582
12	3.30984e+03	57.531	0.11	0.1508
13	3.57997e+03	59.833	0.11	0.1491
14	4.13276e+03	64.287	0.10	0.1461
15	3.16138e+04	177.803	0.04	0.1203
16	1.38324e+05	371.919	0.02	0.1128

Direzione d'ingresso 9 angolo 270.00 [°] SLD

Primi autovalori e modi di vibrare della struttura.

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
------	------------	------------------------	------------------	--------------------------

1	1.64487e+01	4.056	1.55	0.0549
2	1.69490e+01	4.117	1.53	0.0557
3	1.74862e+01	4.182	1.50	0.0566
4	1.78295e+01	4.222	1.49	0.0571
5	1.91168e+01	4.372	1.44	0.0591
6	1.92644e+01	4.389	1.43	0.0594
7	3.67636e+01	6.063	1.04	0.0820
8	3.67636e+01	6.063	1.04	0.0820
9	5.34444e+01	7.311	0.86	0.0989
10	6.28829e+01	7.930	0.79	0.1073
11	1.57199e+03	39.648	0.16	0.1711
12	2.65008e+03	51.479	0.12	0.1561
13	3.82891e+03	61.878	0.10	0.1476
14	4.45504e+03	66.746	0.09	0.1446
15	9.62968e+03	98.131	0.06	0.1322
16	8.25843e+04	287.375	0.02	0.1148

Direzione d'ingresso 10 Sisma Verticale SLD V.**Primi autovalori e modi di vibrare della struttura.**

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
1	1.64487e+01	4.056	1.55	0.0141
2	1.69575e+01	4.118	1.53	0.0141
3	1.74862e+01	4.182	1.50	0.0141
4	1.78300e+01	4.223	1.49	0.0141
5	1.91168e+01	4.372	1.44	0.0141
6	1.92644e+01	4.389	1.43	0.0141
7	3.67636e+01	6.063	1.04	0.0141
8	5.34289e+01	7.310	0.86	0.0141
9	6.28829e+01	7.930	0.79	0.0141
10	2.36751e+03	48.657	0.13	0.0414
11	2.41948e+03	49.188	0.13	0.0414
12	3.02536e+03	55.003	0.11	0.0414
13	3.48059e+03	58.997	0.11	0.0414
14	4.09703e+03	64.008	0.10	0.0414
15	2.26127e+04	150.375	0.04	0.0374
16	5.01607e+04	223.966	0.03	0.0306

Direzione d'ingresso 11 angolo 0.00 [°] SLO**Primi autovalori e modi di vibrare della struttura.**

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
1	1.64487e+01	4.056	1.55	0.0627
2	1.69490e+01	4.117	1.53	0.0636
3	1.74862e+01	4.182	1.50	0.0646
4	1.78295e+01	4.222	1.49	0.0652
5	1.91168e+01	4.372	1.44	0.0676
6	1.92644e+01	4.389	1.43	0.0678
7	3.67636e+01	6.063	1.04	0.0937
8	4.31208e+01	6.567	0.96	0.1015
9	5.34444e+01	7.311	0.86	0.1129
10	6.28941e+01	7.931	0.79	0.1225
11	2.44462e+03	49.443	0.13	0.1843
12	3.31136e+03	57.544	0.11	0.1702
13	3.58109e+03	59.842	0.10	0.1669
14	4.13290e+03	64.288	0.10	0.1612
15	3.16436e+04	177.886	0.04	0.1120
16	1.38529e+05	372.195	0.02	0.0975

Direzione d'ingresso 12 angolo 90.00 [°] SLO**Primi autovalori e modi di vibrare della struttura.**

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
1	1.64487e+01	4.056	1.55	0.0627
2	1.69490e+01	4.117	1.53	0.0636
3	1.74862e+01	4.182	1.50	0.0646
4	1.78295e+01	4.222	1.49	0.0652

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
------	------------	------------------------	------------------	--------------------------

5	1.91168e+01	4.372	1.44	0.0676
6	1.92644e+01	4.389	1.43	0.0678
7	3.67636e+01	6.063	1.04	0.0937
8	3.67636e+01	6.063	1.04	0.0937
9	5.34444e+01	7.311	0.86	0.1129
10	6.28829e+01	7.930	0.79	0.1225
11	1.57199e+03	39.648	0.16	0.2072
12	2.65008e+03	51.479	0.12	0.1803
13	3.82891e+03	61.878	0.10	0.1641
14	4.45504e+03	66.746	0.09	0.1583
15	9.62968e+03	98.131	0.06	0.1346
16	8.25843e+04	287.375	0.02	0.1014

Direzione d'ingresso 13 angolo 180.00 [°] SLO

Primi autovalori e modi di vibrare della struttura.

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
------	------------	------------------------	------------------	--------------------------

1	1.64487e+01	4.056	1.55	0.0627
2	1.69490e+01	4.117	1.53	0.0636
3	1.74862e+01	4.182	1.50	0.0646
4	1.78295e+01	4.222	1.49	0.0652
5	1.91168e+01	4.372	1.44	0.0676
6	1.92644e+01	4.389	1.43	0.0678
7	3.67636e+01	6.063	1.04	0.0937
8	4.20298e+01	6.483	0.97	0.1002
9	5.34444e+01	7.311	0.86	0.1129
10	6.28941e+01	7.931	0.79	0.1225
11	2.44350e+03	49.432	0.13	0.1843
12	3.30984e+03	57.531	0.11	0.1702
13	3.57997e+03	59.833	0.11	0.1669
14	4.13276e+03	64.287	0.10	0.1612
15	3.16138e+04	177.803	0.04	0.1120
16	1.38324e+05	371.919	0.02	0.0975

Direzione d'ingresso 14 angolo 270.00 [°] SLO

Primi autovalori e modi di vibrare della struttura.

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
------	------------	------------------------	------------------	--------------------------

1	1.64487e+01	4.056	1.55	0.0627
2	1.69490e+01	4.117	1.53	0.0636
3	1.74862e+01	4.182	1.50	0.0646
4	1.78295e+01	4.222	1.49	0.0652
5	1.91168e+01	4.372	1.44	0.0676
6	1.92644e+01	4.389	1.43	0.0678
7	3.67636e+01	6.063	1.04	0.0937
8	3.67636e+01	6.063	1.04	0.0937
9	5.34444e+01	7.311	0.86	0.1129
10	6.28829e+01	7.930	0.79	0.1225
11	1.57199e+03	39.648	0.16	0.2072

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
12	2.65008e+03	51.479	0.12	0.1803
13	3.82891e+03	61.878	0.10	0.1641
14	4.45504e+03	66.746	0.09	0.1583
15	9.62968e+03	98.131	0.06	0.1346
16	8.25843e+04	287.375	0.02	0.1014

Direzione d'ingresso 15 Sisma Verticale SLO V.

Primi autovalori e modi di vibrare della struttura.

Modo	Autovalore	Frequenza [rad/sec]	Periodo [sec]	Coefficiente Risposta
1	1.64487e+01	4.056	1.55	0.0028
2	1.69575e+01	4.118	1.53	0.0028
3	1.74862e+01	4.182	1.50	0.0029
4	1.78300e+01	4.223	1.49	0.0030
5	1.91168e+01	4.372	1.44	0.0032
6	1.92644e+01	4.389	1.43	0.0032
7	3.67636e+01	6.063	1.04	0.0062
8	5.34289e+01	7.310	0.86	0.0077
9	6.28829e+01	7.930	0.79	0.0084
10	2.36751e+03	48.657	0.13	0.0442
11	2.41948e+03	49.188	0.13	0.0442
12	3.02536e+03	55.003	0.11	0.0442
13	3.48059e+03	58.997	0.11	0.0442
14	4.09703e+03	64.008	0.10	0.0442
15	2.26127e+04	150.375	0.04	0.0399
16	5.01607e+04	223.966	0.03	0.0327

Direzione di Ingresso del Sisma 1 Angolo 0.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo	Li(gi)	Li / L1	Emi=Li^2/Mi	Emi/EmTot	Sum.Emi/EmTot
5	2.46010e+02	100.0	6.05208e+04	43.8	43.8
6	-2.01988e+02	82.1	4.07991e+04	29.5	73.2
14	1.19964e+02	48.8	1.43914e+04	10.4	83.7
9	-1.00304e+02	40.8	1.00608e+04	7.3	90.9
13	8.44447e+01	34.3	7.13091e+03	5.2	96.1
16	5.54586e+01	22.5	3.07566e+03	2.2	98.3
12	4.16268e+01	16.9	1.73279e+03	1.3	99.6
15	2.28422e+01	9.3	5.21765e+02	0.4	99.9
11	1.05453e+00	0.4	1.11204e+00	0.0	99.9
4	-5.20056e-04	0.0	2.70458e-07	0.0	99.9
7	-2.82486e-04	0.0	7.97984e-08	0.0	99.9
2	1.72007e-04	0.0	2.95866e-08	0.0	99.9
10	7.72905e-06	0.0	5.97382e-11	0.0	99.9
3	2.08302e-07	0.0	4.33896e-14	0.0	99.9
1	4.12269e-08	0.0	1.69966e-15	0.0	99.9
8	-4.85123e-10	0.0	2.35344e-19	0.0	99.9

Direzione di Ingresso del Sisma 2 Angolo 90.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo	Li(gi)	Li / L1	Emi=Li^2/Mi	Emi/EmTot	Sum.Emi/EmTot
17	2.63586e+02	100.0	6.94775e+04	50.2	50.2
23	-1.57801e+02	59.9	2.49013e+04	18.0	68.2
29	-1.25698e+02	47.7	1.57999e+04	11.4	79.7
24	9.80743e+01	37.2	9.61857e+03	7.0	86.6
30	8.74332e+01	33.2	7.64457e+03	5.5	92.1
19	-8.37453e+01	31.8	7.01328e+03	5.1	97.2
32	5.30891e+01	20.1	2.81845e+03	2.0	99.2
31	-1.19027e+01	4.5	1.41674e+02	0.1	99.3
28	-7.04319e+00	2.7	4.96065e+01	0.0	99.4
27	2.85921e-02	0.0	8.17506e-04	0.0	99.4
26	-1.13660e-03	0.0	1.29185e-06	0.0	99.4
18	-1.24621e-04	0.0	1.55305e-08	0.0	99.4
20	-5.41816e-05	0.0	2.93565e-09	0.0	99.4
21	5.26581e-05	0.0	2.77288e-09	0.0	99.4
22	-4.98017e-05	0.0	2.48021e-09	0.0	99.4
25	-2.27496e-05	0.0	5.17545e-10	0.0	99.4

Direzione di Ingresso del Sisma 3 Angolo 180.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo	Li(gi)	Li / L1	Emi=Li^2/Mi	Emi/EmTot	Sum.Emi/EmTot
37	2.46010e+02	100.0	6.05208e+04	43.8	43.8
38	-2.01988e+02	82.1	4.07991e+04	29.5	73.2
46	1.20001e+02	48.8	1.44002e+04	10.4	83.7
41	-1.00304e+02	40.8	1.00608e+04	7.3	90.9
45	8.45608e+01	34.4	7.15053e+03	5.2	96.1
48	5.54502e+01	22.5	3.07473e+03	2.2	98.3
44	-4.12838e+01	16.8	1.70436e+03	1.2	99.6
47	2.28141e+01	9.3	5.20482e+02	0.4	99.9
43	-1.04882e+00	0.4	1.10001e+00	0.0	99.9
36	-5.20056e-04	0.0	2.70458e-07	0.0	99.9
39	-2.94799e-04	0.0	8.69066e-08	0.0	99.9
34	-1.72008e-04	0.0	2.95866e-08	0.0	99.9
33	1.19601e-04	0.0	1.43044e-08	0.0	99.9
35	3.81943e-05	0.0	1.45881e-09	0.0	99.9
42	-7.72904e-06	0.0	5.97381e-11	0.0	99.9
40	-4.97237e-10	0.0	2.47244e-19	0.0	99.9

Direzione di Ingresso del Sisma 4 Angolo 270.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo	Li(gi)	Li / L1	Emi=Li^2/Mi	Emi/EmTot	Sum.Emi/EmTot
49	2.63586e+02	100.0	6.94775e+04	50.2	50.2
55	-1.57801e+02	59.9	2.49013e+04	18.0	68.2
61	1.25698e+02	47.7	1.57999e+04	11.4	79.7
56	-9.80743e+01	37.2	9.61857e+03	7.0	86.6
62	8.74332e+01	33.2	7.64457e+03	5.5	92.1
51	-8.37453e+01	31.8	7.01328e+03	5.1	97.2
64	5.30891e+01	20.1	2.81845e+03	2.0	99.2
63	-1.19027e+01	4.5	1.41674e+02	0.1	99.3
60	-7.04319e+00	2.7	4.96065e+01	0.0	99.4
59	2.85920e-02	0.0	8.17501e-04	0.0	99.4
58	-1.13660e-03	0.0	1.29185e-06	0.0	99.4
53	-1.64246e-04	0.0	2.69766e-08	0.0	99.4
54	1.41421e-04	0.0	2.00000e-08	0.0	99.4
50	-1.24621e-04	0.0	1.55305e-08	0.0	99.4
57	6.82461e-05	0.0	4.65753e-09	0.0	99.4
52	-5.41814e-05	0.0	2.93562e-09	0.0	99.4

Direzione di Ingresso del Sisma 5 Angolo -1.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo	Li(gi)	Li / L1	Emi=Li^2/Mi	Emi/EmTot	Sum.Emi/EmTot
74	3.47767e+02	100.0	1.20942e+05	54.5	54.5
76	-2.80789e+02	80.7	7.88427e+04	35.6	90.1
75	1.25440e+02	36.1	1.57352e+04	7.1	97.2
78	-5.72213e+01	16.5	3.27428e+03	1.5	98.7
77	-4.58271e+01	13.2	2.10012e+03	0.9	99.6
80	2.89182e+01	8.3	8.36263e+02	0.4	100.0
79	-2.74196e+00	0.8	7.51833e+00	0.0	100.0
72	-2.31511e-03	0.0	5.35973e-06	0.0	100.0
65	1.79944e-04	0.0	3.23799e-08	0.0	100.0
67	-9.60893e-05	0.0	9.23316e-09	0.0	100.0
73	-3.35941e-07	0.0	1.12857e-13	0.0	100.0
71	1.80084e-07	0.0	3.24302e-14	0.0	100.0
69	1.26359e-08	0.0	1.59665e-16	0.0	100.0
70	-1.05269e-08	0.0	1.10816e-16	0.0	100.0
68	9.10681e-11	0.0	8.29340e-21	0.0	100.0
66	-6.14784e-12	0.0	3.77960e-23	0.0	100.0

Direzione di Ingresso del Sisma 6 Angolo 0.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo	Li(gi)	Li / L1	Emi=Li^2/Mi	Emi/EmTot	Sum.Emi/EmTot
85	2.46010e+02	100.0	6.05208e+04	43.8	43.8
86	-2.01988e+02	82.1	4.07991e+04	29.5	73.2
94	1.19964e+02	48.8	1.43914e+04	10.4	83.7
89	-1.00304e+02	40.8	1.00608e+04	7.3	90.9

Modo Li(gi) |Li|/|L1| Emi=Li^2/Mi Emi/EmTot Sum.Emi/EmTot

93	8.44447e+01	34.3	7.13091e+03	5.2	96.1
96	5.54586e+01	22.5	3.07566e+03	2.2	98.3
92	4.16268e+01	16.9	1.73279e+03	1.3	99.6
95	2.28422e+01	9.3	5.21765e+02	0.4	99.9
91	1.05453e+00	0.4	1.11204e+00	0.0	99.9
84	-5.20056e-04	0.0	2.70458e-07	0.0	99.9
87	-2.82486e-04	0.0	7.97984e-08	0.0	99.9
82	1.72007e-04	0.0	2.95866e-08	0.0	99.9
90	7.72905e-06	0.0	5.97382e-11	0.0	99.9
83	2.08302e-07	0.0	4.33896e-14	0.0	99.9
81	4.12269e-08	0.0	1.69966e-15	0.0	99.9
88	-4.85123e-10	0.0	2.35344e-19	0.0	99.9

Direzione di Ingresso del Sisma 7 Angolo 90.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo Li(gi) |Li|/|L1| Emi=Li^2/Mi Emi/EmTot Sum.Emi/EmTot

97	2.63586e+02	100.0	6.94775e+04	50.2	50.2
103	-1.57801e+02	59.9	2.49013e+04	18.0	68.2
109	-1.25698e+02	47.7	1.57999e+04	11.4	79.7
104	9.80743e+01	37.2	9.61857e+03	7.0	86.6
110	8.74332e+01	33.2	7.64457e+03	5.5	92.1
99	-8.37453e+01	31.8	7.01328e+03	5.1	97.2
112	5.30891e+01	20.1	2.81845e+03	2.0	99.2
111	-1.19027e+01	4.5	1.41674e+02	0.1	99.3
108	-7.04319e+00	2.7	4.96065e+01	0.0	99.4
107	2.85921e-02	0.0	8.17506e-04	0.0	99.4
106	-1.13660e-03	0.0	1.29185e-06	0.0	99.4
98	-1.24621e-04	0.0	1.55305e-08	0.0	99.4
100	-5.41816e-05	0.0	2.93565e-09	0.0	99.4
101	5.26581e-05	0.0	2.77288e-09	0.0	99.4
102	-4.98017e-05	0.0	2.48021e-09	0.0	99.4
105	-2.27496e-05	0.0	5.17545e-10	0.0	99.4

Direzione di Ingresso del Sisma 8 Angolo 180.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo Li(gi) |Li|/|L1| Emi=Li^2/Mi Emi/EmTot Sum.Emi/EmTot

117	2.46010e+02	100.0	6.05208e+04	43.8	43.8
118	-2.01988e+02	82.1	4.07991e+04	29.5	73.2
126	1.20001e+02	48.8	1.44002e+04	10.4	83.7
121	-1.00304e+02	40.8	1.00608e+04	7.3	90.9
125	8.45608e+01	34.4	7.15053e+03	5.2	96.1
128	5.54502e+01	22.5	3.07473e+03	2.2	98.3
124	-4.12838e+01	16.8	1.70436e+03	1.2	99.6
127	2.28141e+01	9.3	5.20482e+02	0.4	99.9
123	-1.04882e+00	0.4	1.10001e+00	0.0	99.9

Modo Li(gi) |Li|/|L1| Emi=Li^2/Mi Emi/EmTot Sum.Emi/EmTot

116	-5.20056e-04	0.0	2.70458e-07	0.0	99.9
119	-2.94799e-04	0.0	8.69066e-08	0.0	99.9
114	-1.72008e-04	0.0	2.95866e-08	0.0	99.9
113	1.19601e-04	0.0	1.43044e-08	0.0	99.9
115	3.81943e-05	0.0	1.45881e-09	0.0	99.9
122	-7.72904e-06	0.0	5.97381e-11	0.0	99.9
120	-4.97237e-10	0.0	2.47244e-19	0.0	99.9

Direzione di Ingresso del Sisma 9 Angolo 270.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo Li(gi) |Li|/|L1| Emi=Li^2/Mi Emi/EmTot Sum.Emi/EmTot

129	2.63586e+02	100.0	6.94775e+04	50.2	50.2
135	-1.57801e+02	59.9	2.49013e+04	18.0	68.2
141	1.25698e+02	47.7	1.57999e+04	11.4	79.7
136	-9.80743e+01	37.2	9.61857e+03	7.0	86.6
142	8.74332e+01	33.2	7.64457e+03	5.5	92.1
131	-8.37453e+01	31.8	7.01328e+03	5.1	97.2
144	5.30891e+01	20.1	2.81845e+03	2.0	99.2
143	-1.19027e+01	4.5	1.41674e+02	0.1	99.3
140	-7.04319e+00	2.7	4.96065e+01	0.0	99.4
139	2.85920e-02	0.0	8.17501e-04	0.0	99.4
138	-1.13660e-03	0.0	1.29185e-06	0.0	99.4
133	-1.64246e-04	0.0	2.69766e-08	0.0	99.4
134	1.41421e-04	0.0	2.00000e-08	0.0	99.4
130	-1.24621e-04	0.0	1.55305e-08	0.0	99.4
137	6.82461e-05	0.0	4.65753e-09	0.0	99.4
132	-5.41814e-05	0.0	2.93562e-09	0.0	99.4

Direzione di Ingresso del Sisma 10 Angolo -1.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo Li(gi) |Li|/|L1| Emi=Li^2/Mi Emi/EmTot Sum.Emi/EmTot

154	3.47767e+02	100.0	1.20942e+05	54.5	54.5
156	-2.80789e+02	80.7	7.88427e+04	35.6	90.1
155	1.25440e+02	36.1	1.57352e+04	7.1	97.2
158	-5.72213e+01	16.5	3.27428e+03	1.5	98.7
157	-4.58271e+01	13.2	2.10012e+03	0.9	99.6
160	2.89182e+01	8.3	8.36263e+02	0.4	100.0
159	-2.74196e+00	0.8	7.51833e+00	0.0	100.0
152	-2.31511e-03	0.0	5.35973e-06	0.0	100.0
145	1.79944e-04	0.0	3.23799e-08	0.0	100.0
147	-9.60893e-05	0.0	9.23316e-09	0.0	100.0
153	-3.35941e-07	0.0	1.12857e-13	0.0	100.0
151	1.80084e-07	0.0	3.24302e-14	0.0	100.0
149	1.26359e-08	0.0	1.59665e-16	0.0	100.0
150	-1.05269e-08	0.0	1.10816e-16	0.0	100.0

Modo Li(gi) |Li|/|L1| Emi=Li^2/Mi Emi/EmTot Sum.Emi/EmTot

148	9.10681e-11	0.0	8.29340e-21	0.0	100.0
146	-6.14784e-12	0.0	3.77960e-23	0.0	100.0

Direzione di Ingresso del Sisma 11 Angolo 0.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo Li(gi) |Li|/|L1| Emi=Li^2/Mi Emi/EmTot Sum.Emi/EmTot

165	2.46010e+02	100.0	6.05208e+04	43.8	43.8
166	-2.01988e+02	82.1	4.07991e+04	29.5	73.2
174	1.19964e+02	48.8	1.43914e+04	10.4	83.7
169	-1.00304e+02	40.8	1.00608e+04	7.3	90.9
173	8.44447e+01	34.3	7.13091e+03	5.2	96.1
176	5.54586e+01	22.5	3.07566e+03	2.2	98.3
172	4.16268e+01	16.9	1.73279e+03	1.3	99.6
175	2.28422e+01	9.3	5.21765e+02	0.4	99.9
171	1.05453e+00	0.4	1.11204e+00	0.0	99.9
164	-5.20056e-04	0.0	2.70458e-07	0.0	99.9
167	-2.82486e-04	0.0	7.97984e-08	0.0	99.9
162	1.72007e-04	0.0	2.95866e-08	0.0	99.9
170	7.72905e-06	0.0	5.97382e-11	0.0	99.9
163	2.08302e-07	0.0	4.33896e-14	0.0	99.9
161	4.12269e-08	0.0	1.69966e-15	0.0	99.9
168	-4.85123e-10	0.0	2.35344e-19	0.0	99.9

Direzione di Ingresso del Sisma 12 Angolo 90.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo Li(gi) |Li|/|L1| Emi=Li^2/Mi Emi/EmTot Sum.Emi/EmTot

177	2.63586e+02	100.0	6.94775e+04	50.2	50.2
183	-1.57801e+02	59.9	2.49013e+04	18.0	68.2
189	-1.25698e+02	47.7	1.57999e+04	11.4	79.7
184	9.80743e+01	37.2	9.61857e+03	7.0	86.6
190	8.74332e+01	33.2	7.64457e+03	5.5	92.1
179	-8.37453e+01	31.8	7.01328e+03	5.1	97.2
192	5.30891e+01	20.1	2.81845e+03	2.0	99.2
191	-1.19027e+01	4.5	1.41674e+02	0.1	99.3
188	-7.04319e+00	2.7	4.96065e+01	0.0	99.4
187	2.85921e-02	0.0	8.17506e-04	0.0	99.4
186	-1.13660e-03	0.0	1.29185e-06	0.0	99.4
178	-1.24621e-04	0.0	1.55305e-08	0.0	99.4
180	-5.41816e-05	0.0	2.93565e-09	0.0	99.4
181	5.26581e-05	0.0	2.77288e-09	0.0	99.4
182	-4.98017e-05	0.0	2.48021e-09	0.0	99.4
185	-2.27496e-05	0.0	5.17545e-10	0.0	99.4

Direzione di Ingresso del Sisma 13 Angolo 180.00**Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:**

Modo	Li(gi)	Li / L1	Emi=Li^2/Mi	Emi/EmTot	Sum.Emi/EmTot
197	2.46010e+02	100.0	6.05208e+04	43.8	43.8
198	-2.01988e+02	82.1	4.07991e+04	29.5	73.2
206	1.20001e+02	48.8	1.44002e+04	10.4	83.7
201	-1.00304e+02	40.8	1.00608e+04	7.3	90.9
205	8.45608e+01	34.4	7.15053e+03	5.2	96.1
208	5.54502e+01	22.5	3.07473e+03	2.2	98.3
204	-4.12838e+01	16.8	1.70436e+03	1.2	99.6
207	2.28141e+01	9.3	5.20482e+02	0.4	99.9
203	-1.04882e+00	0.4	1.10001e+00	0.0	99.9
196	-5.20056e-04	0.0	2.70458e-07	0.0	99.9
199	-2.94799e-04	0.0	8.69066e-08	0.0	99.9
194	-1.72008e-04	0.0	2.95866e-08	0.0	99.9
193	1.19601e-04	0.0	1.43044e-08	0.0	99.9
195	3.81943e-05	0.0	1.45881e-09	0.0	99.9
202	-7.72904e-06	0.0	5.97381e-11	0.0	99.9
200	-4.97237e-10	0.0	2.47244e-19	0.0	99.9

Direzione di Ingresso del Sisma 14 Angolo 270.00**Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:**

Modo	Li(gi)	Li / L1	Emi=Li^2/Mi	Emi/EmTot	Sum.Emi/EmTot
209	2.63586e+02	100.0	6.94775e+04	50.2	50.2
215	-1.57801e+02	59.9	2.49013e+04	18.0	68.2
221	1.25698e+02	47.7	1.57999e+04	11.4	79.7
216	-9.80743e+01	37.2	9.61857e+03	7.0	86.6
222	8.74332e+01	33.2	7.64457e+03	5.5	92.1
211	-8.37453e+01	31.8	7.01328e+03	5.1	97.2
224	5.30891e+01	20.1	2.81845e+03	2.0	99.2
223	-1.19027e+01	4.5	1.41674e+02	0.1	99.3
220	-7.04319e+00	2.7	4.96065e+01	0.0	99.4
219	2.85920e-02	0.0	8.17501e-04	0.0	99.4
218	-1.13660e-03	0.0	1.29185e-06	0.0	99.4
213	-1.64246e-04	0.0	2.69766e-08	0.0	99.4
214	1.41421e-04	0.0	2.00000e-08	0.0	99.4
210	-1.24621e-04	0.0	1.55305e-08	0.0	99.4
217	6.82461e-05	0.0	4.65753e-09	0.0	99.4
212	-5.41814e-05	0.0	2.93562e-09	0.0	99.4

Direzione di Ingresso del Sisma 15 Angolo -1.00

Coefficienti di partecipazione e masse modali efficaci per i vari modi di vibrare:

Modo	Li(gi)	Li / L1	Emi=Li ² /Mi	Emi/EmTot	Sum.Emi/EmTot
234	3.47767e+02	100.0	1.20942e+05	54.5	54.5
236	-2.80789e+02	80.7	7.88427e+04	35.6	90.1
235	1.25440e+02	36.1	1.57352e+04	7.1	97.2
238	-5.72213e+01	16.5	3.27428e+03	1.5	98.7
237	-4.58271e+01	13.2	2.10012e+03	0.9	99.6
240	2.89182e+01	8.3	8.36263e+02	0.4	100.0
239	-2.74196e+00	0.8	7.51833e+00	0.0	100.0
232	-2.31511e-03	0.0	5.35973e-06	0.0	100.0
225	1.79944e-04	0.0	3.23799e-08	0.0	100.0
227	-9.60893e-05	0.0	9.23316e-09	0.0	100.0
233	-3.35941e-07	0.0	1.12857e-13	0.0	100.0
231	1.80084e-07	0.0	3.24302e-14	0.0	100.0
229	1.26359e-08	0.0	1.59665e-16	0.0	100.0
230	-1.05269e-08	0.0	1.10816e-16	0.0	100.0
228	9.10681e-11	0.0	8.29340e-21	0.0	100.0
226	-6.14784e-12	0.0	3.77960e-23	0.0	100.0

Masse associate ai vari nodi della struttura

N.B. per brevità vengono riportati i soli nodi con massa nodale > 0.0001 [UTM]

Nodo	x [m]	y [m]	z [m]	Massa in direzione x [UTM]	Massa in direzione y [UTM]	Massa in direzione z [UTM]
416	49.17	26.80	8.50	5598.9	5598.9	5598.9
415	39.79	26.80	8.50	8582.5	8582.5	8582.5
414	30.41	26.80	8.50	8586.6	8586.6	8586.6
413	21.03	26.80	8.50	8586.6	8586.6	8586.6
412	11.65	26.80	8.50	8582.5	8582.5	8582.5
411	2.27	26.80	8.50	5598.9	5598.9	5598.9
410	49.17	16.30	8.50	2083.3	2083.3	2083.3
409	2.27	16.30	8.50	2083.3	2083.3	2083.3
408	49.17	10.50	8.50	2083.3	2083.3	2083.3
407	2.27	10.50	8.50	2083.3	2083.3	2083.3
406	49.17	0.00	8.50	5598.9	5598.9	5598.9
405	39.79	0.00	8.50	8582.5	8582.5	8582.5
404	30.41	0.00	8.50	8582.5	8582.5	8582.5
403	21.03	0.00	8.50	8582.5	8582.5	8582.5
402	11.65	0.00	8.50	8582.5	8582.5	8582.5
401	2.27	0.00	8.50	5598.9	5598.9	5598.9
314	30.41	26.80	5.50	754.3	754.3	754.3
313	21.03	26.80	5.50	754.3	754.3	754.3
216	49.17	26.80	3.00	1812.4	1812.4	1812.4
215	39.79	26.80	3.00	1726.8	1726.8	1726.8
214	30.41	26.80	3.00	986.7	986.7	986.7
213	21.03	26.80	3.00	986.7	986.7	986.7
212	11.65	26.80	3.00	1726.8	1726.8	1726.8
211	2.27	26.80	3.00	1812.4	1812.4	1812.4
210	49.17	16.30	3.00	1541.3	1541.3	1541.3
209	2.27	16.30	3.00	1541.3	1541.3	1541.3
208	49.17	10.50	3.00	1541.3	1541.3	1541.3
207	2.27	10.50	3.00	1541.3	1541.3	1541.3
206	49.17	0.00	3.00	1812.4	1812.4	1812.4
205	39.79	0.00	3.00	1726.8	1726.8	1726.8
204	30.41	0.00	3.00	1726.8	1726.8	1726.8
203	21.03	0.00	3.00	1726.8	1726.8	1726.8
202	11.65	0.00	3.00	1726.8	1726.8	1726.8

201	2.27	0.00	3.00	1812.4	1812.4	1812.4
116	49.17	26.80	1.50	776.8	776.8	776.8
115	39.79	26.80	1.50	740.1	740.1	740.1
114	30.41	26.80	1.50	740.1	740.1	740.1
113	21.03	26.80	1.50	740.1	740.1	740.1
112	11.65	26.80	1.50	740.1	740.1	740.1
111	2.27	26.80	1.50	776.8	776.8	776.8
110	49.17	16.30	1.50	660.6	660.6	660.6
109	2.27	16.30	1.50	660.6	660.6	660.6
108	49.17	10.50	1.50	660.6	660.6	660.6
107	2.27	10.50	1.50	660.6	660.6	660.6
106	49.17	0.00	1.50	776.8	776.8	776.8
105	39.79	0.00	1.50	740.1	740.1	740.1
104	30.41	0.00	1.50	740.1	740.1	740.1
103	21.03	0.00	1.50	740.1	740.1	740.1
102	11.65	0.00	1.50	740.1	740.1	740.1
101	2.27	0.00	1.50	776.8	776.8	776.8
24	39.79	17.87	0.00	0.0	0.0	784.2
23	30.41	17.87	0.00	0.0	0.0	784.2
22	21.03	17.87	0.00	0.0	0.0	784.2
21	11.65	17.87	0.00	0.0	0.0	784.2
20	39.79	8.93	0.00	0.0	0.0	784.2
19	30.41	8.93	0.00	0.0	0.0	784.2
18	21.03	8.93	0.00	0.0	0.0	784.2
17	11.65	8.93	0.00	0.0	0.0	784.2
16	49.17	26.80	0.00	0.0	0.0	5078.5
15	39.79	26.80	0.00	0.0	0.0	5339.0
14	30.41	26.80	0.00	0.0	0.0	5339.0
13	21.03	26.80	0.00	0.0	0.0	5339.0
12	11.65	26.80	0.00	0.0	0.0	5339.0
11	2.27	26.80	0.00	0.0	0.0	5078.5
10	49.17	16.30	0.00	0.0	0.0	3530.3
9	2.27	16.30	0.00	0.0	0.0	3530.3
8	49.17	10.50	0.00	0.0	0.0	3530.3
7	2.27	10.50	0.00	0.0	0.0	3530.3
6	49.17	0.00	0.00	0.0	0.0	5078.5
5	39.79	0.00	0.00	0.0	0.0	5339.0
4	30.41	0.00	0.00	0.0	0.0	5339.0
3	21.03	0.00	0.00	0.0	0.0	5339.0
2	11.65	0.00	0.00	0.0	0.0	5339.0
1	2.27	0.00	0.00	0.0	0.0	5078.5
Totale				138324.8	138324.8	221745.8

RISULTATI DELL'ANALISI DINAMICA

I_s	raggio d'inerzia polare di piano $I_s = \sqrt{J_p / m}$
X_{Gj}, Y_{Gj}, Z_{Gj}	coordinate centro di massaModale
Dx, Dy	eccentricità centro di massa-centro delle rigidezza
$K_{fzz}, K_{tmin}, K_{tmax}$	rigidezze traslanti e torcenti
r_1, r_2	raggi giroscopi d'inerzia ($r_1 = (K_{fzz}/K_{tmin})^{1/2}$, $r_2 = (K_{fzz}/K_{tmax})^{1/2}$)
$\Delta K_x, \Delta K_y, \Delta K_{\theta z}$	incrementi percentuali di rigidezza ($\Delta K = (K_i - K_{i-1})/K_{i-1}$)
$K_{xi}, K_{yi}, K_{\theta zi}$	rigidezze traslanti e torsionali del piano i-esimo rispetto agli assi globali
R	ordinata dello spettro
Coeff. di Part.	coefficienti di partecipazione (in letteratura g_{ij})
$ L_i / L_1 $	rapporto percentuale fra i fattori di partecipazione del modo i-esimo e del primo modo
Mmi/Mmtot	percentuale massa modale efficace dell'i-esimo modo
Sum Mmi/Mmtot	percentuale cumulativa delle masse modali efficaci
$\Phi_{iUx}, \Phi_{iUy}, \Phi_{i\theta z}$	spostamenti modali del nodo master

Modalità di valutazione della risposta modale

risposta $S = CQC(S_i)$

segno risposta = sign($\sum S_i$)

Sintesi dei risultati SLV per direzione d'ingresso del sisma.

Analisi Modale via Vettori di Ritz

Direzione d'ingresso	Modo Principale	Periodo [sec]	% Massa Modale Modo Principale	% Massa Modale Totale
0.00 [°] SLV	5	1.44	43.8	99.9
90.00 [°] SLV	17	1.55	50.2	99.4
180.00 [°] SLV	37	1.44	43.8	99.9
270.00 [°] SLV	49	1.55	50.2	99.4

Pressioni sul terreno

Convenzioni adottate

Nel seguito vengono riportate le pressioni trasmesse al terreno dalla struttura in corrispondenza dei nodi di fondazione.

Nodo	Comb.	x [m]	y [m]	z [m]	σ [kg/cm ²]
1	SLU Statiche -	2.27	0.00	0.00	0.8
	SLU Statiche +				0.9
	SLV -				0.5
	SLV +				0.7
	SLE Rare -				0.6
	SLE Rare +				0.7
	SLE Frequenti -				0.6
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.6
	SLD +				0.7
	SLO -				0.6
	SLO +				0.7
2	SLU Statiche -	11.65	0.00	0.00	1.0
	SLU Statiche +				1.1
	SLV -				0.6
	SLV +				0.9
	SLE Rare -				0.8
	SLE Rare +				0.8
	SLE Frequenti -				0.8
	SLE Frequenti +				0.8
	SLE Quasi Permanenti -				0.8
	SLE Quasi Permanenti +				0.8
	SLD -				0.7
	SLD +				0.8
	SLO -				0.7
	SLO +				0.8
3	SLU Statiche -	21.03	0.00	0.00	1.0
	SLU Statiche +				1.1
	SLV -				0.6
	SLV +				0.9
	SLE Rare -				0.8
	SLE Rare +				0.8
	SLE Frequenti -				0.8
	SLE Frequenti +				0.8

Nodo	Comb.	x [m]	y [m]	z [m]	σ [kg/cm ²]
	SLE Quasi Permanenti +				0.8
	SLD -				0.7
	SLD +				0.8
	SLO -				0.7
	SLO +				0.8
4	SLU Statiche -	30.41	0.00	0.00	1.0
	SLU Statiche +				1.1
	SLV -				0.6
	SLV +				0.9
	SLE Rare -				0.8
	SLE Rare +				0.8
	SLE Frequenti -				0.8
	SLE Frequenti +				0.8
5	SLE Quasi Permanenti -				0.8
	SLE Quasi Permanenti +				0.8
	SLD -				0.7
	SLD +				0.8
	SLO -				0.7
	SLO +				0.8
6	SLU Statiche -	39.79	0.00	0.00	1.0
	SLU Statiche +				1.1
	SLV -				0.6
	SLV +				0.9
	SLE Rare -				0.8
	SLE Rare +				0.8
	SLE Frequenti -				0.8
	SLE Frequenti +				0.8
	SLE Quasi Permanenti -				0.8
	SLE Quasi Permanenti +				0.8
	SLD -				0.7
	SLD +				0.8
	SLO -				0.7
	SLO +				0.8
	SLU Statiche -	49.17	0.00	0.00	0.8
	SLU Statiche +				0.9
	SLV -				0.5
	SLV +				0.7

Nodo	Comb.	x [m]	y [m]	z [m]	σ [kg/cm ²]
	SLE Rare -				0.6
	SLE Rare +				0.7
	SLE Frequenti -				0.6
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.6
	SLD +				0.7
	SLO -				0.6
	SLO +				0.7
7	SLU Statiche -	2.27	10.50	0.00	0.8
	SLU Statiche +				0.8
	SLV -				0.5
	SLV +				0.8
	SLE Rare -				0.6
	SLE Rare +				0.6
	SLE Frequenti -				0.6
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.6
	SLD +				0.7
	SLO -				0.6
	SLO +				0.7
8	SLU Statiche -	49.17	10.50	0.00	0.8
	SLU Statiche +				0.8
	SLV -				0.5
	SLV +				0.8
	SLE Rare -				0.6
	SLE Rare +				0.6
	SLE Frequenti -				0.6
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.6
	SLD +				0.7
	SLO -				0.6
	SLO +				0.7
9	SLU Statiche -	2.27	16.30	0.00	0.8
	SLU Statiche +				0.8
	SLV -				0.5
	SLV +				0.8
	SLE Rare -				0.6
	SLE Rare +				0.6
	SLE Frequenti -				0.6
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.6
	SLD +				0.7
	SLO -				0.6
	SLO +				0.7
10	SLU Statiche -	49.17	16.30	0.00	0.8
	SLU Statiche +				0.8
	SLV -				0.5
	SLV +				0.8

Nodo	Comb.	x [m]	y [m]	z [m]	σ [kg/cm ²]
	SLE Rare -				0.6
	SLE Rare +				0.6
	SLE Frequenti -				0.6
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.6
	SLD +				0.7
	SLO -				0.6
	SLO +				0.7
11	SLU Statiche -	2.27	26.80	0.00	0.8
	SLU Statiche +				0.9
	SLV -				0.5
	SLV +				0.7
	SLE Rare -				0.6
	SLE Rare +				0.7
	SLE Frequenti -				0.6
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.6
	SLD +				0.7
	SLO -				0.6
	SLO +				0.7
12	SLU Statiche -	11.65	26.80	0.00	1.0
	SLU Statiche +				1.1
	SLV -				0.6
	SLV +				0.9
	SLE Rare -				0.8
	SLE Rare +				0.8
	SLE Frequenti -				0.8
	SLE Frequenti +				0.8
	SLE Quasi Permanenti -				0.8
	SLE Quasi Permanenti +				0.8
	SLD -				0.7
	SLD +				0.8
	SLO -				0.7
	SLO +				0.8
13	SLU Statiche -	21.03	26.80	0.00	1.0
	SLU Statiche +				1.1
	SLV -				0.6
	SLV +				0.9
	SLE Rare -				0.8
	SLE Rare +				0.8
	SLE Frequenti -				0.8
	SLE Frequenti +				0.8
	SLE Quasi Permanenti -				0.8
	SLE Quasi Permanenti +				0.8
	SLD -				0.7
	SLD +				0.8
	SLO -				0.7
	SLO +				0.8
14	SLU Statiche -	30.41	26.80	0.00	1.0
	SLU Statiche +				1.1
	SLV -				0.6
	SLV +				0.9

Nodo	Comb.	x [m]	y [m]	z [m]	σ [kg/cm ²]
	SLE Rare -				0.8
	SLE Rare +				0.8
	SLE Frequenti -				0.8
	SLE Frequenti +				0.8
	SLE Quasi Permanenti -				0.8
	SLE Quasi Permanenti +				0.8
	SLD -				0.7
	SLD +				0.8
	SLO -				0.7
	SLO +				0.8
15	SLU Statiche -	39.79	26.80	0.00	1.0
	SLU Statiche +				1.1
	SLV -				0.6
	SLV +				0.9
	SLE Rare -				0.8
	SLE Rare +				0.8
	SLE Frequenti -				0.8
	SLE Frequenti +				0.8
	SLE Quasi Permanenti -				0.8
	SLE Quasi Permanenti +				0.8
	SLD -				0.7
	SLD +				0.8
	SLO -				0.7
	SLO +				0.8
16	SLU Statiche -	49.17	26.80	0.00	0.8
	SLU Statiche +				0.9
	SLV -				0.5
	SLV +				0.7
	SLE Rare -				0.6
	SLE Rare +				0.7
	SLE Frequenti -				0.6
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.6
	SLD +				0.7
	SLO -				0.6
	SLO +				0.7
17	SLU Statiche -	11.65	8.93	0.00	0.7
	SLU Statiche +				0.8
	SLV -				0.4
	SLV +				0.7
	SLE Rare -				0.5
	SLE Rare +				0.6
	SLE Frequenti -				0.5
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.5
	SLD +				0.6
	SLO -				0.5
	SLO +				0.6
18	SLU Statiche -	21.03	8.93	0.00	0.7
	SLU Statiche +				0.8
	SLV -				0.4
	SLV +				0.7

Nodo	Comb.	x [m]	y [m]	z [m]	σ [kg/cm ²]
	SLE Rare -				0.5
	SLE Rare +				0.6
	SLE Frequenti -				0.5
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.5
	SLD +				0.6
	SLO -				0.5
	SLO +				0.6
19	SLU Statiche -	30.41	8.93	0.00	0.7
	SLU Statiche +				0.8
	SLV -				0.4
	SLV +				0.7
	SLE Rare -				0.5
	SLE Rare +				0.6
	SLE Frequenti -				0.5
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.5
	SLD +				0.6
	SLO -				0.5
	SLO +				0.6
20	SLU Statiche -	39.79	8.93	0.00	0.7
	SLU Statiche +				0.8
	SLV -				0.4
	SLV +				0.7
	SLE Rare -				0.5
	SLE Rare +				0.6
	SLE Frequenti -				0.5
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.5
	SLD +				0.6
	SLO -				0.5
	SLO +				0.6
21	SLU Statiche -	11.65	17.87	0.00	0.7
	SLU Statiche +				0.8
	SLV -				0.4
	SLV +				0.7
	SLE Rare -				0.5
	SLE Rare +				0.6
	SLE Frequenti -				0.5
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.5
	SLD +				0.6
	SLO -				0.5
	SLO +				0.6
22	SLU Statiche -	21.03	17.87	0.00	0.7
	SLU Statiche +				0.8
	SLV -				0.4
	SLV +				0.7

Nodo	Comb.	x [m]	y [m]	z [m]	σ [kg/cm ²]
	SLE Rare -				0.5
	SLE Rare +				0.6
	SLE Frequenti -				0.5
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.5
	SLD +				0.6
	SLO -				0.5
	SLO +				0.6
23	SLU Statiche -	30.41	17.87	0.00	0.7
	SLU Statiche +				0.8
	SLV -				0.4
	SLV +				0.7
	SLE Rare -				0.5
	SLE Rare +				0.6
	SLE Frequenti -				0.5
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6

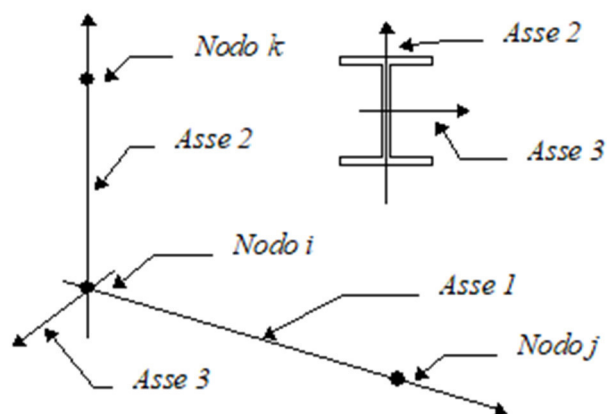
Nodo	Comb.	x [m]	y [m]	z [m]	σ [kg/cm ²]
	SLE Quasi Permanenti +				0.6
	SLD -				0.5
	SLD +				0.6
	SLO -				0.5
	SLO +				0.6
24	SLU Statiche -	39.79	17.87	0.00	0.7
	SLU Statiche +				0.8
	SLV -				0.4
	SLV +				0.7
	SLE Rare -				0.5
	SLE Rare +				0.6
	SLE Frequenti -				0.5
	SLE Frequenti +				0.6
	SLE Quasi Permanenti -				0.6
	SLE Quasi Permanenti +				0.6
	SLD -				0.5
	SLD +				0.6
	SLO -				0.5
	SLO +				0.6

Sollecitazioni nelle travi

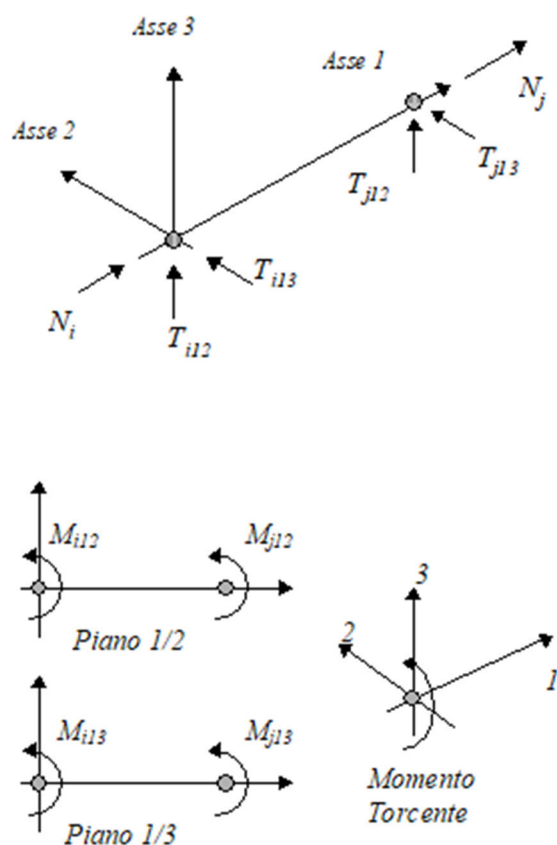
Convenzioni adottate

Le sollecitazioni nelle travi sono da intendersi nel sistema di riferimento locale dell'elemento, e si riferiscono all'asta. L'orientamento della trave nello spazio è definito a mezzo del nodo K.

La terna di riferimento locale dell'asta è così disposta:



Per quanto concerne i segni positivi assunti per le varie componenti di sollecitazione si assumono come positivi i versi e le sollecitazioni se così diretti:



Per ogni trave vengono riportate, nelle varie combinazioni di carico, le componenti di sollecitazione alle estremità dell'asta.

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
SLU Statiche -	1	0.0	4294.9	0.0	-485.1	0.0	6448.4
	2	0.0	3575.9	0.0	-214.4	0.0	-6195.3
SLU Statiche +	1	0.0	4959.9	0.0	214.4	0.0	10073.0
	2	0.0	4240.9	0.0	485.1	0.0	-3582.2
SLV -	1	0.0	767.2	0.0	-1239.4	0.0	-7207.3
	2	0.0	268.9	0.0	-1034.0	0.0	-16393.3
SLV +	1	0.0	6297.1	0.0	1034.0	0.0	19660.6
	2	0.0	5798.8	0.0	1239.4	0.0	8614.1
SLE Rare -	1	0.0	3334.2	0.0	-337.1	0.0	5129.2
	2	0.0	2788.5	0.0	-129.2	0.0	-4648.8
SLE Rare +	1	0.0	3777.5	0.0	129.2	0.0	7545.5
	2	0.0	3231.8	0.0	337.1	0.0	-2906.8
SLE Frequenti -	1	0.0	3487.8	0.0	-149.3	0.0	5985.0
	2	0.0	2989.5	0.0	56.1	0.0	-4063.8
SLE Frequenti +	1	0.0	3576.5	0.0	-56.1	0.0	6468.3
	2	0.0	3078.2	0.0	149.3	0.0	-3715.4
SLE Quasi Permanenti -	1	0.0	3532.1	0.0	-102.7	0.0	6226.6
	2	0.0	3033.8	0.0	102.7	0.0	-3889.6
SLE Quasi Permanenti +	1	0.0	3532.1	0.0	-102.7	0.0	6226.6
	2	0.0	3033.8	0.0	102.7	0.0	-3889.6
SLD -	1	0.0	1768.9	0.0	-837.1	0.0	-2346.7
	2	0.0	1270.6	0.0	-631.7	0.0	-11856.7
SLD +	1	0.0	5295.4	0.0	631.7	0.0	14799.9
	2	0.0	4797.1	0.0	837.1	0.0	4077.5
SLO -	1	0.0	1520.1	0.0	-941.4	0.0	-3556.9

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	2	0.0	1021.8	0.0	-736.0	0.0	-12980.4
SLO +	1	0.0	5544.2	0.0	736.0	0.0	16010.2
	2	0.0	5045.9	0.0	941.4	0.0	5201.2
SLU Statiche -	2	0.0	4042.2	0.0	-12.2	0.0	5556.8
	3	0.0	4113.5	0.0	-7.0	0.0	-7673.9
SLU Statiche +	2	0.0	4422.3	0.0	7.0	0.0	7309.6
	3	0.0	4493.6	0.0	12.2	0.0	-5860.9
SLV -	2	0.0	797.2	0.0	-238.9	0.0	-6569.9
	3	0.0	847.0	0.0	-235.0	0.0	-16747.9
SLV +	2	0.0	5719.0	0.0	235.0	0.0	16501.1
	3	0.0	5768.7	0.0	238.9	0.0	6349.9
SLE Rare -	2	0.0	3129.2	0.0	-8.4	0.0	4366.6
	3	0.0	3183.4	0.0	-4.4	0.0	-5809.2
SLE Rare +	2	0.0	3382.6	0.0	4.4	0.0	5535.1
	3	0.0	3436.8	0.0	8.4	0.0	-4600.4
SLE Frequenti -	2	0.0	3232.8	0.0	-3.2	0.0	4848.7
	3	0.0	3282.5	0.0	0.7	0.0	-5319.9
SLE Frequenti +	2	0.0	3283.5	0.0	-0.7	0.0	5082.5
	3	0.0	3333.2	0.0	3.2	0.0	-5078.1
SLE Quasi Permanenti -	2	0.0	3258.1	0.0	-2.0	0.0	4965.6
	3	0.0	3307.9	0.0	2.0	0.0	-5199.0
SLE Quasi Permanenti +	2	0.0	3258.1	0.0	-2.0	0.0	4965.6
	3	0.0	3307.9	0.0	2.0	0.0	-5199.0
SLD -	2	0.0	1669.8	0.0	-155.3	0.0	-2472.7
	3	0.0	1719.6	0.0	-151.4	0.0	-12659.2
SLD +	2	0.0	4846.4	0.0	151.4	0.0	12403.9
	3	0.0	4896.2	0.0	155.3	0.0	2261.2
SLO -	2	0.0	1444.9	0.0	-177.1	0.0	-3526.0
	3	0.0	1494.6	0.0	-173.2	0.0	-13716.3
SLO +	2	0.0	5071.4	0.0	173.2	0.0	13457.2
	3	0.0	5121.1	0.0	177.1	0.0	3318.3
SLU Statiche -	3	0.0	4070.3	0.0	-0.0	0.0	5752.5
	4	0.0	4070.3	0.0	-0.0	0.0	-7606.0
SLU Statiche +	3	0.0	4465.5	0.0	0.0	0.0	7606.0
	4	0.0	4465.5	0.0	0.0	0.0	-5752.5
SLV -	3	0.0	822.5	0.0	-0.1	0.0	-6407.2
	4	0.0	822.5	0.0	-0.1	0.0	-16682.0
SLV +	3	0.0	5743.5	0.0	0.1	0.0	16682.0
	4	0.0	5743.5	0.0	0.1	0.0	6407.2
SLE Rare -	3	0.0	3151.3	0.0	-0.0	0.0	4520.0
	4	0.0	3151.3	0.0	-0.0	0.0	-5755.7
SLE Rare +	3	0.0	3414.7	0.0	0.0	0.0	5755.7
	4	0.0	3414.7	0.0	0.0	0.0	-4520.0
SLE Frequenti -	3	0.0	3256.7	0.0	-0.0	0.0	5013.8
	4	0.0	3256.7	0.0	-0.0	0.0	-5260.9
SLE Frequenti +	3	0.0	3309.3	0.0	0.0	0.0	5260.9
	4	0.0	3309.3	0.0	0.0	0.0	-5013.8
SLE Quasi Permanenti -	3	0.0	3283.0	0.0	-0.0	0.0	5137.4
	4	0.0	3283.0	0.0	0.0	0.0	-5137.4
SLE Quasi Permanenti +	3	0.0	3283.0	0.0	-0.0	0.0	5137.4
	4	0.0	3283.0	0.0	0.0	0.0	-5137.4
SLD -	3	0.0	1690.5	0.0	-0.1	0.0	-2332.8
	4	0.0	1690.5	0.0	-0.1	0.0	-12607.6
SLD +	3	0.0	4875.5	0.0	0.1	0.0	12607.6

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	4	0.0	4875.5	0.0	0.1	0.0	2332.8
SLO -	3	0.0	1464.7	0.0	-0.1	0.0	-3392.1
	4	0.0	1464.7	0.0	-0.1	0.0	-13666.8
SLO +	3	0.0	5101.4	0.0	0.1	0.0	13666.8
	4	0.0	5101.3	0.0	0.1	0.0	3392.1
SLU Statiche -	4	0.0	4113.5	0.0	-7.0	0.0	5860.9
	5	0.0	4042.2	0.0	-12.2	0.0	-7309.6
SLU Statiche +	4	0.0	4493.6	0.0	12.2	0.0	7673.9
	5	0.0	4422.3	0.0	7.0	0.0	-5556.8
SLV -	4	0.0	847.0	0.0	-235.0	0.0	-6349.9
	5	0.0	797.2	0.0	-238.9	0.0	-16501.1
SLV +	4	0.0	5768.8	0.0	238.9	0.0	16748.0
	5	0.0	5719.0	0.0	235.0	0.0	6570.0
SLE Rare -	4	0.0	3183.4	0.0	-4.4	0.0	4600.5
	5	0.0	3129.2	0.0	-8.4	0.0	-5535.1
SLE Rare +	4	0.0	3436.8	0.0	8.4	0.0	5809.2
	5	0.0	3382.6	0.0	4.4	0.0	-4366.6
SLE Frequenti -	4	0.0	3282.5	0.0	0.7	0.0	5078.1
	5	0.0	3232.8	0.0	-3.2	0.0	-5082.5
SLE Frequenti +	4	0.0	3333.2	0.0	3.2	0.0	5319.9
	5	0.0	3283.5	0.0	-0.7	0.0	-4848.7
SLE Quasi Permanenti -	4	0.0	3307.9	0.0	2.0	0.0	5199.0
	5	0.0	3258.1	0.0	-2.0	0.0	-4965.6
SLE Quasi Permanenti +	4	0.0	3307.9	0.0	2.0	0.0	5199.0
	5	0.0	3258.1	0.0	-2.0	0.0	-4965.6
SLD -	4	0.0	1719.6	0.0	-151.4	0.0	-2261.2
	5	0.0	1669.8	0.0	-155.3	0.0	-12403.9
SLD +	4	0.0	4896.2	0.0	155.3	0.0	12659.2
	5	0.0	4846.4	0.0	151.4	0.0	2472.7
SLO -	4	0.0	1494.6	0.0	-173.2	0.0	-3318.3
	5	0.0	1444.8	0.0	-177.1	0.0	-13457.2
SLO +	4	0.0	5121.2	0.0	177.1	0.0	13716.4
	5	0.0	5071.4	0.0	173.2	0.0	3526.0
SLU Statiche -	5	0.0	3575.9	0.0	-214.4	0.0	3582.2
	6	0.0	4294.9	0.0	-485.1	0.0	-10073.0
SLU Statiche +	5	0.0	4240.9	0.0	485.1	0.0	6195.3
	6	0.0	4959.9	0.0	214.4	0.0	-6448.4
SLV -	5	0.0	268.8	0.0	-1033.9	0.0	-8614.1
	6	0.0	767.2	0.0	-1239.4	0.0	-19660.6
SLV +	5	0.0	5798.8	0.0	1239.4	0.0	16393.3
	6	0.0	6297.1	0.0	1033.9	0.0	7207.4
SLE Rare -	5	0.0	2788.5	0.0	-129.2	0.0	2906.8
	6	0.0	3334.2	0.0	-337.1	0.0	-7545.5
SLE Rare +	5	0.0	3231.8	0.0	337.1	0.0	4648.8
	6	0.0	3777.5	0.0	129.2	0.0	-5129.2
SLE Frequenti -	5	0.0	2989.5	0.0	56.1	0.0	3715.4
	6	0.0	3487.8	0.0	-149.3	0.0	-6468.3
SLE Frequenti +	5	0.0	3078.2	0.0	149.3	0.0	4063.8
	6	0.0	3576.5	0.0	-56.1	0.0	-5985.0
SLE Quasi Permanenti -	5	0.0	3033.8	0.0	102.7	0.0	3889.6
	6	0.0	3532.1	0.0	-102.7	0.0	-6226.6
SLE Quasi Permanenti +	5	0.0	3033.8	0.0	102.7	0.0	3889.6
	6	0.0	3532.1	0.0	-102.7	0.0	-6226.6
SLD -	5	0.0	1270.6	0.0	-631.7	0.0	-4077.5

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	6	0.0	1768.9	0.0	-837.1	0.0	-14800.0
SLD +	5	0.0	4797.1	0.0	837.1	0.0	11856.7
	6	0.0	5295.4	0.0	631.7	0.0	2346.7
SLO -	5	0.0	1021.8	0.0	-736.0	0.0	-5201.2
	6	0.0	1520.1	0.0	-941.4	0.0	-16010.2
SLO +	5	0.0	5045.9	0.0	941.4	0.0	12980.4
	6	0.0	5544.2	0.0	736.0	0.0	3557.0
SLU Statiche -	11	0.0	4297.9	0.0	-214.2	0.0	6463.2
	12	0.0	3572.9	0.0	-485.3	0.0	-6181.6
SLU Statiche +	11	0.0	4962.9	0.0	485.3	0.0	10087.7
	12	0.0	4237.9	0.0	214.2	0.0	-3568.6
SLV -	11	0.0	751.5	0.0	-1033.8	0.0	-7283.5
	12	0.0	248.6	0.0	-1239.5	0.0	-16463.8
SLV +	11	0.0	6317.4	0.0	1239.5	0.0	19759.4
	12	0.0	5814.5	0.0	1033.8	0.0	8705.6
SLE Rare -	11	0.0	3336.5	0.0	-129.1	0.0	5140.5
	12	0.0	2786.1	0.0	-337.3	0.0	-4638.3
SLE Rare +	11	0.0	3779.9	0.0	337.3	0.0	7556.9
	12	0.0	3229.5	0.0	129.1	0.0	-2896.3
SLE Frequenti -	11	0.0	3490.1	0.0	56.2	0.0	5996.3
	12	0.0	2987.2	0.0	-149.5	0.0	-4053.3
SLE Frequenti +	11	0.0	3578.8	0.0	149.5	0.0	6479.6
	12	0.0	3075.9	0.0	-56.2	0.0	-3704.9
SLE Quasi Permanenti -	11	0.0	3534.5	0.0	102.9	0.0	6238.0
	12	0.0	3031.5	0.0	-102.9	0.0	-3879.1
SLE Quasi Permanenti +	11	0.0	3534.5	0.0	102.9	0.0	6238.0
	12	0.0	3031.5	0.0	-102.9	0.0	-3879.1
SLD -	11	0.0	1759.5	0.0	-631.5	0.0	-2392.5
	12	0.0	1256.5	0.0	-837.3	0.0	-11899.0
SLD +	11	0.0	5309.5	0.0	837.3	0.0	14868.4
	12	0.0	4806.5	0.0	631.5	0.0	4140.8
SLO -	11	0.0	1509.0	0.0	-735.8	0.0	-3610.9
	12	0.0	1006.1	0.0	-941.6	0.0	-13030.3
SLO +	11	0.0	5559.9	0.0	941.6	0.0	16086.8
	12	0.0	5057.0	0.0	735.8	0.0	5272.1
SLU Statiche -	12	0.0	4045.2	0.0	-6.8	0.0	5570.5
	13	0.0	4110.4	0.0	-12.4	0.0	-7659.0
SLU Statiche +	12	0.0	4425.4	0.0	12.4	0.0	7323.3
	13	0.0	4490.6	0.0	6.8	0.0	-5846.0
SLV -	12	0.0	782.1	0.0	-239.6	0.0	-6637.8
	13	0.0	827.2	0.0	-243.8	0.0	-16824.5
SLV +	12	0.0	5738.8	0.0	243.8	0.0	16590.1
	13	0.0	5783.9	0.0	239.6	0.0	6449.5
SLE Rare -	12	0.0	3131.6	0.0	-4.2	0.0	4377.2
	13	0.0	3181.0	0.0	-8.5	0.0	-5797.7
SLE Rare +	12	0.0	3385.0	0.0	8.5	0.0	5545.7
	13	0.0	3434.4	0.0	4.2	0.0	-4589.0
SLE Frequenti -	12	0.0	3235.1	0.0	0.8	0.0	4859.3
	13	0.0	3280.2	0.0	-3.4	0.0	-5308.4
SLE Frequenti +	12	0.0	3285.8	0.0	3.4	0.0	5093.0
	13	0.0	3330.9	0.0	-0.8	0.0	-5066.7
SLE Quasi Permanenti -	12	0.0	3260.5	0.0	2.1	0.0	4976.2
	13	0.0	3305.5	0.0	-2.1	0.0	-5187.5
SLE Quasi Permanenti +	12	0.0	3260.5	0.0	2.1	0.0	4976.2

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	13	0.0	3305.5	0.0	-2.1	0.0	-5187.5
SLD -	12	0.0	1660.6	0.0	-153.6	0.0	-2513.9
	13	0.0	1705.7	0.0	-157.8	0.0	-12705.6
SLD +	12	0.0	4860.3	0.0	157.8	0.0	12466.2
	13	0.0	4905.4	0.0	153.6	0.0	2330.6
SLO -	12	0.0	1433.8	0.0	-175.5	0.0	-3575.2
	13	0.0	1478.8	0.0	-179.8	0.0	-13772.2
SLO +	12	0.0	5087.2	0.0	179.8	0.0	13527.6
	13	0.0	5132.2	0.0	175.5	0.0	3397.2
SLU Statiche -	13	0.0	4070.3	0.0	-0.0	0.0	5751.3
	14	0.0	4070.3	0.0	-0.0	0.0	-7604.8
SLU Statiche +	13	0.0	4465.5	0.0	0.0	0.0	7604.8
	14	0.0	4465.5	0.0	0.0	0.0	-5751.3
SLV -	13	0.0	802.9	0.0	-0.2	0.0	-6500.6
	14	0.0	802.9	0.0	-0.2	0.0	-16773.5
SLV +	13	0.0	5763.1	0.0	0.2	0.0	16773.5
	14	0.0	5763.1	0.0	0.2	0.0	6500.6
SLE Rare -	13	0.0	3151.3	0.0	-0.0	0.0	4519.1
	14	0.0	3151.3	0.0	-0.0	0.0	-5754.8
SLE Rare +	13	0.0	3414.7	0.0	0.0	0.0	5754.8
	14	0.0	3414.7	0.0	0.0	0.0	-4519.1
SLE Frequenti -	13	0.0	3256.7	0.0	-0.0	0.0	5012.9
	14	0.0	3256.7	0.0	-0.0	0.0	-5260.0
SLE Frequenti +	13	0.0	3309.3	0.0	0.0	0.0	5260.0
	14	0.0	3309.3	0.0	0.0	0.0	-5012.9
SLE Quasi Permanenti -	13	0.0	3283.0	0.0	0.0	0.0	5136.4
	14	0.0	3283.0	0.0	-0.0	0.0	-5136.4
SLE Quasi Permanenti +	13	0.0	3283.0	0.0	0.0	0.0	5136.4
	14	0.0	3283.0	0.0	-0.0	0.0	-5136.4
SLD -	13	0.0	1676.8	0.0	-0.1	0.0	-2398.0
	14	0.0	1676.8	0.0	-0.1	0.0	-12670.9
SLD +	13	0.0	4889.2	0.0	0.1	0.0	12670.9
	14	0.0	4889.2	0.0	0.1	0.0	2398.0
SLO -	13	0.0	1448.7	0.0	-0.2	0.0	-3468.0
	14	0.0	1448.7	0.0	-0.2	0.0	-13740.9
SLO +	13	0.0	5117.3	0.0	0.2	0.0	13740.9
	14	0.0	5117.3	0.0	0.2	0.0	3468.0
SLU Statiche -	14	0.0	4110.4	0.0	-12.4	0.0	5846.0
	15	0.0	4045.2	0.0	-6.8	0.0	-7323.3
SLU Statiche +	14	0.0	4490.6	0.0	6.8	0.0	7659.0
	15	0.0	4425.4	0.0	12.4	0.0	-5570.5
SLV -	14	0.0	827.2	0.0	-243.8	0.0	-6449.5
	15	0.0	782.1	0.0	-239.6	0.0	-16590.1
SLV +	14	0.0	5783.9	0.0	239.6	0.0	16824.6
	15	0.0	5738.8	0.0	243.8	0.0	6637.8
SLE Rare -	14	0.0	3181.0	0.0	-8.5	0.0	4589.0
	15	0.0	3131.6	0.0	-4.2	0.0	-5545.7
SLE Rare +	14	0.0	3434.4	0.0	4.2	0.0	5797.7
	15	0.0	3385.0	0.0	8.5	0.0	-4377.2
SLE Frequenti -	14	0.0	3280.2	0.0	-3.4	0.0	5066.7
	15	0.0	3235.1	0.0	0.8	0.0	-5093.0
SLE Frequenti +	14	0.0	3330.9	0.0	-0.8	0.0	5308.4
	15	0.0	3285.8	0.0	3.4	0.0	-4859.3
SLE Quasi Permanenti -	14	0.0	3305.5	0.0	-2.1	0.0	5187.5

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	15	0.0	3260.5	0.0	2.1	0.0	-4976.2
SLE Quasi Permanenti +	14	0.0	3305.5	0.0	-2.1	0.0	5187.5
	15	0.0	3260.5	0.0	2.1	0.0	-4976.2
SLD -	14	0.0	1705.7	0.0	-157.8	0.0	-2330.6
	15	0.0	1660.6	0.0	-153.6	0.0	-12466.2
SLD +	14	0.0	4905.4	0.0	153.6	0.0	12705.6
	15	0.0	4860.3	0.0	157.8	0.0	2513.9
SLO -	14	0.0	1478.8	0.0	-179.8	0.0	-3397.2
	15	0.0	1433.8	0.0	-175.5	0.0	-13527.6
SLO +	14	0.0	5132.2	0.0	175.5	0.0	13772.2
	15	0.0	5087.2	0.0	179.8	0.0	3575.3
SLU Statiche -	15	0.0	3572.9	0.0	-485.3	0.0	3568.6
	16	0.0	4297.9	0.0	-214.2	0.0	-10087.7
SLU Statiche +	15	0.0	4237.9	0.0	214.2	0.0	6181.6
	16	0.0	4962.9	0.0	485.3	0.0	-6463.2
SLV -	15	0.0	248.5	0.0	-1239.6	0.0	-8705.6
	16	0.0	751.5	0.0	-1033.8	0.0	-19759.5
SLV +	15	0.0	5814.5	0.0	1033.8	0.0	16463.8
	16	0.0	6317.4	0.0	1239.6	0.0	7283.5
SLE Rare -	15	0.0	2786.1	0.0	-337.3	0.0	2896.3
	16	0.0	3336.5	0.0	-129.1	0.0	-7556.9
SLE Rare +	15	0.0	3229.5	0.0	129.1	0.0	4638.3
	16	0.0	3779.9	0.0	337.3	0.0	-5140.5
SLE Frequenti -	15	0.0	2987.2	0.0	-149.5	0.0	3704.9
	16	0.0	3490.1	0.0	56.2	0.0	-6479.6
SLE Frequenti +	15	0.0	3075.9	0.0	-56.2	0.0	4053.3
	16	0.0	3578.8	0.0	149.5	0.0	-5996.3
SLE Quasi Permanenti -	15	0.0	3031.5	0.0	-102.9	0.0	3879.1
	16	0.0	3534.5	0.0	102.9	0.0	-6238.0
SLE Quasi Permanenti +	15	0.0	3031.5	0.0	-102.9	0.0	3879.1
	16	0.0	3534.5	0.0	102.9	0.0	-6238.0
SLD -	15	0.0	1256.5	0.0	-837.3	0.0	-4140.9
	16	0.0	1759.5	0.0	-631.5	0.0	-14868.4
SLD +	15	0.0	4806.5	0.0	631.5	0.0	11899.0
	16	0.0	5309.5	0.0	837.3	0.0	2392.5
SLO -	15	0.0	1006.1	0.0	-941.6	0.0	-5272.1
	16	0.0	1509.0	0.0	-735.9	0.0	-16086.8
SLO +	15	0.0	5057.0	0.0	735.9	0.0	13030.3
	16	0.0	5559.9	0.0	941.6	0.0	3610.9
SLU Statiche -	1	0.0	4513.2	0.0	-1122.3	0.0	6393.9
	7	0.0	4308.6	0.0	-1216.9	0.0	-9168.5
SLU Statiche +	1	0.0	5246.4	0.0	1216.9	0.0	10445.7
	7	0.0	5041.7	0.0	1122.3	0.0	-5522.8
SLV -	1	0.0	1758.0	0.0	-1478.3	0.0	-3633.9
	7	0.0	1563.2	0.0	-1547.6	0.0	-16496.8
SLV +	1	0.0	5786.8	0.0	1547.6	0.0	16789.0
	7	0.0	5592.0	0.0	1478.3	0.0	5386.9
SLE Rare -	1	0.0	3511.8	0.0	-743.6	0.0	5139.6
	7	0.0	3349.4	0.0	-815.9	0.0	-6853.0
SLE Rare +	1	0.0	4000.6	0.0	815.9	0.0	7840.8
	7	0.0	3838.2	0.0	743.6	0.0	-4422.5
SLE Frequenti -	1	0.0	3723.5	0.0	-121.3	0.0	6307.4
	7	0.0	3528.7	0.0	-190.6	0.0	-5798.0
SLE Frequenti +	1	0.0	3821.3	0.0	190.6	0.0	6847.7

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	7	0.0	3626.5	0.0	121.3	0.0	-5311.9
SLE Quasi Permanenti -	1	0.0	3772.4	0.0	34.7	0.0	6577.5
	7	0.0	3577.6	0.0	-34.7	0.0	-5555.0
SLE Quasi Permanenti +	1	0.0	3772.4	0.0	34.7	0.0	6577.5
	7	0.0	3577.6	0.0	-34.7	0.0	-5555.0
SLD -	1	0.0	2471.0	0.0	-942.5	0.0	-17.9
	7	0.0	2276.2	0.0	-1011.8	0.0	-12625.6
SLD +	1	0.0	5073.8	0.0	1011.8	0.0	13173.0
	7	0.0	4879.0	0.0	942.5	0.0	1515.7
SLO -	1	0.0	2286.6	0.0	-1081.2	0.0	-952.1
	7	0.0	2091.8	0.0	-1150.6	0.0	-13627.5
SLO +	1	0.0	5258.2	0.0	1150.6	0.0	14107.2
	7	0.0	5063.4	0.0	1081.2	0.0	2517.6
SLU Statiche -	7	0.0	1755.1	0.0	-0.0	0.0	1186.0
	9	0.0	1755.1	0.0	-0.0	0.0	-6312.6
SLU Statiche +	7	0.0	3522.9	0.0	0.0	0.0	6312.6
	9	0.0	3522.9	0.0	0.0	0.0	-1186.1
SLV -	7	0.0	-4198.9	0.0	-13.5	0.0	-15227.4
	9	0.0	-4199.0	0.0	-13.5	0.0	-20947.2
SLV +	7	0.0	8259.0	0.0	13.5	0.0	20947.5
	9	0.0	8258.9	0.0	13.5	0.0	15226.6
SLE Rare -	7	0.0	1440.7	0.0	-0.0	0.0	1172.0
	9	0.0	1440.7	0.0	-0.0	0.0	-4589.8
SLE Rare +	7	0.0	2619.3	0.0	0.0	0.0	4589.7
	9	0.0	2619.3	0.0	0.0	0.0	-1172.1
SLE Frequenti -	7	0.0	1912.1	0.0	-0.0	0.0	2518.4
	9	0.0	1912.2	0.0	0.0	0.0	-3202.0
SLE Frequenti +	7	0.0	2147.8	0.0	-0.0	0.0	3201.9
	9	0.0	2147.9	0.0	0.0	0.0	-2518.4
SLE Quasi Permanenti -	7	0.0	2030.0	0.0	-0.0	0.0	2860.2
	9	0.0	2030.0	0.0	0.0	0.0	-2860.2
SLE Quasi Permanenti +	7	0.0	2030.0	0.0	-0.0	0.0	2860.2
	9	0.0	2030.0	0.0	0.0	0.0	-2860.2
SLD -	7	0.0	-1995.8	0.0	-8.6	0.0	-8824.6
	9	0.0	-1995.8	0.0	-8.5	0.0	-14544.6
SLD +	7	0.0	6055.8	0.0	8.5	0.0	14544.8
	9	0.0	6055.8	0.0	8.6	0.0	8824.1
SLO -	7	0.0	-2564.5	0.0	-9.7	0.0	-10474.9
	9	0.0	-2564.5	0.0	-9.7	0.0	-16194.8
SLO +	7	0.0	6624.5	0.0	9.7	0.0	16195.1
	9	0.0	6624.5	0.0	9.7	0.0	10474.3
SLU Statiche -	9	0.0	4308.7	0.0	-1217.1	0.0	5522.9
	11	0.0	4513.2	0.0	-1122.1	0.0	-10445.7
SLU Statiche +	9	0.0	5041.8	0.0	1122.1	0.0	9168.6
	11	0.0	5246.3	0.0	1217.1	0.0	-6393.8
SLV -	9	0.0	1563.2	0.0	-1550.0	0.0	-5386.9
	11	0.0	1758.0	0.0	-1480.4	0.0	-16789.1
SLV +	9	0.0	5592.0	0.0	1480.4	0.0	16497.0
	11	0.0	5786.8	0.0	1550.0	0.0	3634.1
SLE Rare -	9	0.0	3349.5	0.0	-816.1	0.0	4422.6
	11	0.0	3511.8	0.0	-743.4	0.0	-7840.8
SLE Rare +	9	0.0	3838.2	0.0	743.4	0.0	6853.1
	11	0.0	4000.5	0.0	816.1	0.0	-5139.5
SLE Frequenti -	9	0.0	3528.7	0.0	-190.8	0.0	5312.0

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	11	0.0	3723.5	0.0	-121.1	0.0	-6847.6
SLE Frequenti +	9	0.0	3626.5	0.0	121.1	0.0	5798.1
	11	0.0	3821.2	0.0	190.8	0.0	-6307.4
SLE Quasi Permanenti -	9	0.0	3577.6	0.0	-34.8	0.0	5555.0
	11	0.0	3772.4	0.0	34.8	0.0	-6577.5
SLE Quasi Permanenti +	9	0.0	3577.6	0.0	-34.8	0.0	5555.0
	11	0.0	3772.4	0.0	34.8	0.0	-6577.5
SLD -	9	0.0	2276.2	0.0	-1013.5	0.0	-1515.7
	11	0.0	2470.9	0.0	-943.8	0.0	-13173.1
SLD +	9	0.0	4879.1	0.0	943.8	0.0	12625.7
	11	0.0	5073.8	0.0	1013.5	0.0	18.1
SLO -	9	0.0	2091.8	0.0	-1152.4	0.0	-2517.7
	11	0.0	2286.6	0.0	-1082.8	0.0	-14107.3
SLO +	9	0.0	5063.4	0.0	1082.8	0.0	13627.7
	11	0.0	5258.2	0.0	1152.4	0.0	952.3
SLU Statiche -	2	0.0	3127.4	0.0	-5.5	0.0	-310.0
	17	0.0	3869.8	0.0	-15.4	0.0	-8063.1
SLU Statiche +	2	0.0	4259.5	0.0	15.4	0.0	8313.0
	17	0.0	5002.0	0.0	5.5	0.0	-6572.1
SLV -	2	0.0	1697.6	0.0	-140.0	0.0	-5598.9
	17	0.0	2202.0	0.0	-146.9	0.0	-7232.1
SLV +	2	0.0	4051.3	0.0	146.9	0.0	12137.2
	17	0.0	4555.8	0.0	140.0	0.0	-3812.8
SLE Rare -	2	0.0	2468.2	0.0	-3.2	0.0	229.2
	17	0.0	3030.4	0.0	-10.7	0.0	-6111.8
SLE Rare +	2	0.0	3223.0	0.0	10.7	0.0	5977.9
	17	0.0	3785.2	0.0	3.2	0.0	-5117.7
SLE Frequenti -	2	0.0	2799.0	0.0	2.0	0.0	2694.3
	17	0.0	3303.4	0.0	-4.8	0.0	-5621.9
SLE Frequenti +	2	0.0	2949.9	0.0	4.8	0.0	3844.0
	17	0.0	3454.4	0.0	-2.0	0.0	-5423.0
SLE Quasi Permanenti -	2	0.0	2874.4	0.0	3.4	0.0	3269.1
	17	0.0	3378.9	0.0	-3.4	0.0	-5522.5
SLE Quasi Permanenti +	2	0.0	2874.4	0.0	3.4	0.0	3269.1
	17	0.0	3378.9	0.0	-3.4	0.0	-5522.5
SLD -	2	0.0	2129.9	0.0	-88.9	0.0	-2374.7
	17	0.0	2634.4	0.0	-95.8	0.0	-6564.1
SLD +	2	0.0	3619.0	0.0	95.8	0.0	8912.9
	17	0.0	4123.5	0.0	88.9	0.0	-4480.8
SLO -	2	0.0	2025.2	0.0	-102.0	0.0	-3170.8
	17	0.0	2529.7	0.0	-108.9	0.0	-6705.8
SLO +	2	0.0	3723.7	0.0	108.9	0.0	9709.1
	17	0.0	4228.2	0.0	102.0	0.0	-4339.2
SLU Statiche -	17	0.0	3903.7	0.0	-0.2	0.0	6549.3
	21	0.0	3905.3	0.0	0.1	0.0	-7987.6
SLU Statiche +	17	0.0	4224.0	0.0	-0.1	0.0	7980.2
	21	0.0	4225.7	0.0	0.2	0.0	-6556.7
SLV -	17	0.0	2787.0	0.0	-12.7	0.0	3837.2
	21	0.0	2788.3	0.0	-12.5	0.0	-7140.9
SLV +	17	0.0	3465.0	0.0	12.5	0.0	7135.3
	21	0.0	3466.3	0.0	12.7	0.0	-3843.0
SLE Rare -	17	0.0	3019.2	0.0	-0.2	0.0	5097.7
	21	0.0	3020.5	0.0	0.1	0.0	-6057.3
SLE Rare +	17	0.0	3232.8	0.0	-0.1	0.0	6051.6

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	21	0.0	3234.1	0.0	0.2	0.0	-5103.4
SLE Frequenti -	17	0.0	3104.7	0.0	-0.1	0.0	5390.8
	21	0.0	3105.9	0.0	0.1	0.0	-5587.3
SLE Frequenti +	17	0.0	3147.4	0.0	-0.1	0.0	5581.6
	21	0.0	3148.7	0.0	0.1	0.0	-5396.5
SLE Quasi Permanenti -	17	0.0	3126.0	0.0	-0.1	0.0	5486.2
	21	0.0	3127.3	0.0	0.1	0.0	-5491.9
SLE Quasi Permanenti +	17	0.0	3126.0	0.0	-0.1	0.0	5486.2
	21	0.0	3127.3	0.0	0.1	0.0	-5491.9
SLD -	17	0.0	2909.0	0.0	-8.3	0.0	4482.1
	21	0.0	2910.3	0.0	-8.0	0.0	-6496.0
SLD +	17	0.0	3343.0	0.0	8.0	0.0	6490.3
	21	0.0	3344.3	0.0	8.3	0.0	-4487.8
SLO -	17	0.0	2879.1	0.0	-9.4	0.0	4345.9
	21	0.0	2880.3	0.0	-9.2	0.0	-6632.2
SLO +	17	0.0	3373.0	0.0	9.2	0.0	6626.5
	21	0.0	3374.3	0.0	9.4	0.0	-4351.6
SLU Statiche -	21	0.0	3871.9	0.0	-15.7	0.0	6579.7
	12	0.0	3125.3	0.0	-5.2	0.0	-8301.7
SLU Statiche +	21	0.0	5004.1	0.0	5.2	0.0	8070.8
	12	0.0	4257.4	0.0	15.7	0.0	321.2
SLV -	21	0.0	2203.6	0.0	-150.6	0.0	3818.7
	12	0.0	1695.9	0.0	-143.2	0.0	-12128.7
SLV +	21	0.0	4557.4	0.0	143.2	0.0	7237.9
	12	0.0	4049.7	0.0	150.6	0.0	5607.7
SLE Rare -	21	0.0	3032.0	0.0	-11.0	0.0	5123.6
	12	0.0	2466.6	0.0	-3.0	0.0	-5969.2
SLE Rare +	21	0.0	3786.8	0.0	3.0	0.0	6117.6
	12	0.0	3221.3	0.0	11.0	0.0	-220.6
SLE Frequenti -	21	0.0	3305.0	0.0	-5.1	0.0	5428.9
	12	0.0	2797.3	0.0	2.3	0.0	-3835.4
SLE Frequenti +	21	0.0	3456.0	0.0	-2.3	0.0	5627.7
	12	0.0	2948.3	0.0	5.1	0.0	-2685.6
SLE Quasi Permanenti -	21	0.0	3380.5	0.0	-3.7	0.0	5528.3
	12	0.0	2872.8	0.0	3.7	0.0	-3260.5
SLE Quasi Permanenti +	21	0.0	3380.5	0.0	-3.7	0.0	5528.3
	12	0.0	2872.8	0.0	3.7	0.0	-3260.5
SLD -	21	0.0	2635.9	0.0	-98.2	0.0	4486.6
	12	0.0	2128.2	0.0	-90.9	0.0	-8904.6
SLD +	21	0.0	4125.1	0.0	90.9	0.0	6570.0
	12	0.0	3617.4	0.0	98.2	0.0	2383.6
SLO -	21	0.0	2531.2	0.0	-111.6	0.0	4345.0
	12	0.0	2023.5	0.0	-104.3	0.0	-9700.7
SLO +	21	0.0	4229.8	0.0	104.3	0.0	6711.6
	12	0.0	3722.1	0.0	111.6	0.0	3179.8
SLU Statiche -	3	0.0	3116.9	0.0	-11.9	0.0	-385.7
	18	0.0	3858.7	0.0	-11.3	0.0	-8081.0
SLU Statiche +	3	0.0	4270.6	0.0	11.3	0.0	8401.4
	18	0.0	5012.4	0.0	11.9	0.0	-6561.7
SLV -	3	0.0	1647.6	0.0	-144.7	0.0	-5982.1
	18	0.0	2151.3	0.0	-144.2	0.0	-7282.9
SLV +	3	0.0	4102.1	0.0	144.2	0.0	12531.9
	18	0.0	4605.8	0.0	144.7	0.0	-3766.7
SLE Rare -	3	0.0	2461.2	0.0	-8.0	0.0	179.5

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	18	0.0	3023.0	0.0	-7.5	0.0	-6124.0
SLE Rare +	3	0.0	3230.4	0.0	7.5	0.0	6037.6
	18	0.0	3792.1	0.0	8.0	0.0	-5111.1
SLE Frequenti -	3	0.0	2797.9	0.0	-1.8	0.0	2689.1
	18	0.0	3301.6	0.0	-1.3	0.0	-5626.0
SLE Frequenti +	3	0.0	2951.7	0.0	1.3	0.0	3860.7
	18	0.0	3455.4	0.0	1.8	0.0	-5423.5
SLE Quasi Permanenti -	3	0.0	2874.8	0.0	-0.2	0.0	3274.9
	18	0.0	3378.5	0.0	0.2	0.0	-5524.8
SLE Quasi Permanenti +	3	0.0	2874.8	0.0	-0.2	0.0	3274.9
	18	0.0	3378.5	0.0	0.2	0.0	-5524.8
SLD -	3	0.0	2097.4	0.0	-93.5	0.0	-2621.9
	18	0.0	2601.1	0.0	-93.0	0.0	-6600.4
SLD +	3	0.0	3652.2	0.0	93.0	0.0	9171.8
	18	0.0	4155.9	0.0	93.5	0.0	-4449.1
SLO -	3	0.0	1988.0	0.0	-106.6	0.0	-3454.1
	18	0.0	2491.7	0.0	-106.2	0.0	-6747.5
SLO +	3	0.0	3761.7	0.0	106.2	0.0	10003.9
	18	0.0	4265.3	0.0	106.6	0.0	-4302.0
SLU Statiche -	18	0.0	3899.8	0.0	-0.1	0.0	6539.2
	22	0.0	3903.1	0.0	0.1	0.0	-8012.0
SLU Statiche +	18	0.0	4226.2	0.0	-0.1	0.0	7997.3
	22	0.0	4229.5	0.0	0.1	0.0	-6554.0
SLV -	18	0.0	2777.9	0.0	-19.1	0.0	3795.0
	22	0.0	2780.5	0.0	-19.0	0.0	-7175.2
SLV +	18	0.0	3472.8	0.0	19.0	0.0	7181.8
	22	0.0	3475.4	0.0	19.1	0.0	-3824.3
SLE Rare -	18	0.0	3016.6	0.0	-0.1	0.0	5091.3
	22	0.0	3019.1	0.0	0.1	0.0	-6074.7
SLE Rare +	18	0.0	3234.2	0.0	-0.1	0.0	6063.3
	22	0.0	3236.7	0.0	0.1	0.0	-5102.6
SLE Frequenti -	18	0.0	3103.6	0.0	-0.1	0.0	5391.2
	22	0.0	3106.2	0.0	0.1	0.0	-5596.9
SLE Frequenti +	18	0.0	3147.2	0.0	-0.1	0.0	5585.6
	22	0.0	3149.7	0.0	0.1	0.0	-5402.5
SLE Quasi Permanenti -	18	0.0	3125.4	0.0	-0.1	0.0	5488.4
	22	0.0	3127.9	0.0	0.1	0.0	-5499.7
SLE Quasi Permanenti +	18	0.0	3125.4	0.0	-0.1	0.0	5488.4
	22	0.0	3127.9	0.0	0.1	0.0	-5499.7
SLD -	18	0.0	2902.2	0.0	-11.7	0.0	4452.8
	22	0.0	2904.8	0.0	-11.6	0.0	-6526.1
SLD +	18	0.0	3348.6	0.0	11.6	0.0	6523.9
	22	0.0	3351.1	0.0	11.7	0.0	-4473.3
SLO -	18	0.0	2871.1	0.0	-13.1	0.0	4311.4
	22	0.0	2873.6	0.0	-13.0	0.0	-6667.3
SLO +	18	0.0	3379.7	0.0	13.0	0.0	6665.3
	22	0.0	3382.2	0.0	13.1	0.0	-4332.2
SLU Statiche -	22	0.0	3862.9	0.0	-11.4	0.0	6576.8
	13	0.0	3112.7	0.0	-11.8	0.0	-8379.0
SLU Statiche +	22	0.0	5016.6	0.0	11.8	0.0	8096.2
	13	0.0	4266.4	0.0	11.4	0.0	408.2
SLV -	22	0.0	2153.5	0.0	-148.5	0.0	3795.9
	13	0.0	1643.4	0.0	-148.7	0.0	-12531.4
SLV +	22	0.0	4610.0	0.0	148.7	0.0	7276.9

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	13	0.0	4099.8	0.0	148.5	0.0	6016.1
SLE Rare -	22	0.0	3026.2	0.0	-7.6	0.0	5122.8
	13	0.0	2458.0	0.0	-7.9	0.0	-6020.3
SLE Rare +	22	0.0	3795.3	0.0	7.9	0.0	6135.7
	13	0.0	3227.1	0.0	7.6	0.0	-162.2
SLE Frequenti -	22	0.0	3304.8	0.0	-1.4	0.0	5435.1
	13	0.0	2794.7	0.0	-1.7	0.0	-3843.5
SLE Frequenti +	22	0.0	3458.7	0.0	1.7	0.0	5637.7
	13	0.0	2948.5	0.0	1.4	0.0	-2671.8
SLE Quasi Permanenti -	22	0.0	3381.8	0.0	0.1	0.0	5536.4
	13	0.0	2871.6	0.0	-0.1	0.0	-3257.7
SLE Quasi Permanenti +	22	0.0	3381.8	0.0	0.1	0.0	5536.4
	13	0.0	2871.6	0.0	-0.1	0.0	-3257.7
SLD -	22	0.0	2603.4	0.0	-96.0	0.0	4469.7
	13	0.0	2093.2	0.0	-96.2	0.0	-9166.9
SLD +	22	0.0	4160.1	0.0	96.2	0.0	6603.1
	13	0.0	3650.0	0.0	96.0	0.0	2651.6
SLO -	22	0.0	2493.7	0.0	-109.7	0.0	4322.8
	13	0.0	1983.5	0.0	-109.9	0.0	-10001.6
SLO +	22	0.0	4269.9	0.0	109.9	0.0	6750.0
	13	0.0	3759.7	0.0	109.7	0.0	3486.3
SLU Statiche -	4	0.0	3116.9	0.0	-11.3	0.0	-385.7
	19	0.0	3858.7	0.0	-11.9	0.0	-8081.0
SLU Statiche +	4	0.0	4270.6	0.0	11.9	0.0	8401.4
	19	0.0	5012.4	0.0	11.3	0.0	-6561.7
SLV -	4	0.0	1647.6	0.0	-144.2	0.0	-5982.1
	19	0.0	2151.3	0.0	-144.7	0.0	-7282.9
SLV +	4	0.0	4102.1	0.0	144.7	0.0	12531.9
	19	0.0	4605.8	0.0	144.2	0.0	-3766.7
SLE Rare -	4	0.0	2461.2	0.0	-7.5	0.0	179.5
	19	0.0	3023.0	0.0	-8.0	0.0	-6124.0
SLE Rare +	4	0.0	3230.4	0.0	8.0	0.0	6037.6
	19	0.0	3792.1	0.0	7.5	0.0	-5111.1
SLE Frequenti -	4	0.0	2797.9	0.0	-1.3	0.0	2689.1
	19	0.0	3301.6	0.0	-1.8	0.0	-5626.0
SLE Frequenti +	4	0.0	2951.7	0.0	1.8	0.0	3860.7
	19	0.0	3455.4	0.0	1.3	0.0	-5423.5
SLE Quasi Permanenti -	4	0.0	2874.8	0.0	0.2	0.0	3274.9
	19	0.0	3378.5	0.0	-0.2	0.0	-5524.8
SLE Quasi Permanenti +	4	0.0	2874.8	0.0	0.2	0.0	3274.9
	19	0.0	3378.5	0.0	-0.2	0.0	-5524.8
SLD -	4	0.0	2097.4	0.0	-93.0	0.0	-2621.9
	19	0.0	2601.1	0.0	-93.5	0.0	-6600.4
SLD +	4	0.0	3652.2	0.0	93.5	0.0	9171.7
	19	0.0	4155.9	0.0	93.0	0.0	-4449.1
SLO -	4	0.0	1988.0	0.0	-106.2	0.0	-3454.1
	19	0.0	2491.7	0.0	-106.6	0.0	-6747.5
SLO +	4	0.0	3761.7	0.0	106.6	0.0	10003.9
	19	0.0	4265.3	0.0	106.2	0.0	-4302.0
SLU Statiche -	19	0.0	3899.8	0.0	0.1	0.0	6539.2
	23	0.0	3903.1	0.0	-0.1	0.0	-8012.0
SLU Statiche +	19	0.0	4226.2	0.0	0.1	0.0	7997.3
	23	0.0	4229.5	0.0	-0.1	0.0	-6554.0
SLV -	19	0.0	2777.9	0.0	-19.0	0.0	3795.0

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	23	0.0	2780.5	0.0	-19.1	0.0	-7175.1
SLV +	19	0.0	3472.8	0.0	19.1	0.0	7181.8
	23	0.0	3475.4	0.0	19.0	0.0	-3824.3
SLE Rare -	19	0.0	3016.6	0.0	0.1	0.0	5091.3
	23	0.0	3019.1	0.0	-0.1	0.0	-6074.7
SLE Rare +	19	0.0	3234.2	0.0	0.1	0.0	6063.3
	23	0.0	3236.7	0.0	-0.1	0.0	-5102.6
SLE Frequenti -	19	0.0	3103.6	0.0	0.1	0.0	5391.2
	23	0.0	3106.2	0.0	-0.1	0.0	-5596.9
SLE Frequenti +	19	0.0	3147.2	0.0	0.1	0.0	5585.6
	23	0.0	3149.7	0.0	-0.1	0.0	-5402.5
SLE Quasi Permanenti -	19	0.0	3125.4	0.0	0.1	0.0	5488.4
	23	0.0	3127.9	0.0	-0.1	0.0	-5499.7
SLE Quasi Permanenti +	19	0.0	3125.4	0.0	0.1	0.0	5488.4
	23	0.0	3127.9	0.0	-0.1	0.0	-5499.7
SLD -	19	0.0	2902.2	0.0	-11.6	0.0	4452.9
	23	0.0	2904.8	0.0	-11.7	0.0	-6526.1
SLD +	19	0.0	3348.6	0.0	11.7	0.0	6523.9
	23	0.0	3351.1	0.0	11.6	0.0	-4473.3
SLO -	19	0.0	2871.1	0.0	-13.0	0.0	4311.4
	23	0.0	2873.6	0.0	-13.1	0.0	-6667.3
SLO +	19	0.0	3379.7	0.0	13.1	0.0	6665.3
	23	0.0	3382.2	0.0	13.0	0.0	-4332.2
SLU Statiche -	23	0.0	3862.9	0.0	-11.8	0.0	6576.8
	14	0.0	3112.7	0.0	-11.4	0.0	-8379.0
SLU Statiche +	23	0.0	5016.6	0.0	11.4	0.0	8096.2
	14	0.0	4266.4	0.0	11.8	0.0	408.2
SLV -	23	0.0	2153.5	0.0	-148.7	0.0	3795.9
	14	0.0	1643.4	0.0	-148.5	0.0	-12531.4
SLV +	23	0.0	4610.0	0.0	148.5	0.0	7276.9
	14	0.0	4099.8	0.0	148.7	0.0	6016.1
SLE Rare -	23	0.0	3026.2	0.0	-7.9	0.0	5122.8
	14	0.0	2458.0	0.0	-7.6	0.0	-6020.3
SLE Rare +	23	0.0	3795.3	0.0	7.6	0.0	6135.7
	14	0.0	3227.1	0.0	7.9	0.0	-162.2
SLE Frequenti -	23	0.0	3304.8	0.0	-1.7	0.0	5435.1
	14	0.0	2794.7	0.0	-1.4	0.0	-3843.5
SLE Frequenti +	23	0.0	3458.7	0.0	1.4	0.0	5637.7
	14	0.0	2948.5	0.0	1.7	0.0	-2671.8
SLE Quasi Permanenti -	23	0.0	3381.8	0.0	-0.1	0.0	5536.4
	14	0.0	2871.6	0.0	0.1	0.0	-3257.7
SLE Quasi Permanenti +	23	0.0	3381.8	0.0	-0.1	0.0	5536.4
	14	0.0	2871.6	0.0	0.1	0.0	-3257.7
SLD -	23	0.0	2603.4	0.0	-96.2	0.0	4469.7
	14	0.0	2093.2	0.0	-96.0	0.0	-9166.9
SLD +	23	0.0	4160.1	0.0	96.0	0.0	6603.1
	14	0.0	3650.0	0.0	96.2	0.0	2651.6
SLO -	23	0.0	2493.6	0.0	-109.9	0.0	4322.8
	14	0.0	1983.5	0.0	-109.7	0.0	-10001.6
SLO +	23	0.0	4269.9	0.0	109.7	0.0	6750.0
	14	0.0	3759.7	0.0	109.9	0.0	3486.3
SLU Statiche -	5	0.0	3127.4	0.0	-15.4	0.0	-310.0
	20	0.0	3869.8	0.0	-5.5	0.0	-8063.1
SLU Statiche +	5	0.0	4259.5	0.0	5.5	0.0	8313.0

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	20	0.0	5002.0	0.0	15.4	0.0	-6572.1
SLV -	5	0.0	1697.6	0.0	-146.9	0.0	-5598.9
	20	0.0	2202.0	0.0	-140.0	0.0	-7232.1
SLV +	5	0.0	4051.3	0.0	140.0	0.0	12137.2
	20	0.0	4555.8	0.0	146.9	0.0	-3812.8
SLE Rare -	5	0.0	2468.2	0.0	-10.7	0.0	229.2
	20	0.0	3030.4	0.0	-3.2	0.0	-6111.8
SLE Rare +	5	0.0	3223.0	0.0	3.2	0.0	5977.9
	20	0.0	3785.2	0.0	10.7	0.0	-5117.7
SLE Frequenti -	5	0.0	2799.0	0.0	-4.8	0.0	2694.3
	20	0.0	3303.4	0.0	2.0	0.0	-5621.9
SLE Frequenti +	5	0.0	2949.9	0.0	-2.0	0.0	3844.0
	20	0.0	3454.4	0.0	4.8	0.0	-5423.0
SLE Quasi Permanenti -	5	0.0	2874.4	0.0	-3.4	0.0	3269.1
	20	0.0	3378.9	0.0	3.4	0.0	-5522.5
SLE Quasi Permanenti +	5	0.0	2874.4	0.0	-3.4	0.0	3269.1
	20	0.0	3378.9	0.0	3.4	0.0	-5522.5
SLD -	5	0.0	2129.9	0.0	-95.8	0.0	-2374.7
	20	0.0	2634.4	0.0	-88.9	0.0	-6564.1
SLD +	5	0.0	3619.0	0.0	88.9	0.0	8912.9
	20	0.0	4123.5	0.0	95.8	0.0	-4480.8
SLO -	5	0.0	2025.2	0.0	-108.9	0.0	-3170.8
	20	0.0	2529.7	0.0	-102.0	0.0	-6705.8
SLO +	5	0.0	3723.7	0.0	102.0	0.0	9709.1
	20	0.0	4228.2	0.0	108.9	0.0	-4339.2
SLU Statiche -	20	0.0	3903.7	0.0	0.1	0.0	6549.3
	24	0.0	3905.3	0.0	-0.2	0.0	-7987.6
SLU Statiche +	20	0.0	4224.0	0.0	0.2	0.0	7980.2
	24	0.0	4225.7	0.0	-0.1	0.0	-6556.7
SLV -	20	0.0	2787.0	0.0	-12.5	0.0	3837.2
	24	0.0	2788.3	0.0	-12.8	0.0	-7140.8
SLV +	20	0.0	3465.0	0.0	12.8	0.0	7135.3
	24	0.0	3466.3	0.0	12.5	0.0	-3843.0
SLE Rare -	20	0.0	3019.2	0.0	0.1	0.0	5097.7
	24	0.0	3020.5	0.0	-0.2	0.0	-6057.3
SLE Rare +	20	0.0	3232.8	0.0	0.2	0.0	6051.6
	24	0.0	3234.1	0.0	-0.1	0.0	-5103.4
SLE Frequenti -	20	0.0	3104.7	0.0	0.1	0.0	5390.8
	24	0.0	3105.9	0.0	-0.1	0.0	-5587.3
SLE Frequenti +	20	0.0	3147.4	0.0	0.1	0.0	5581.6
	24	0.0	3148.7	0.0	-0.1	0.0	-5396.5
SLE Quasi Permanenti -	20	0.0	3126.0	0.0	0.1	0.0	5486.2
	24	0.0	3127.3	0.0	-0.1	0.0	-5491.9
SLE Quasi Permanenti +	20	0.0	3126.0	0.0	0.1	0.0	5486.2
	24	0.0	3127.3	0.0	-0.1	0.0	-5491.9
SLD -	20	0.0	2909.0	0.0	-8.0	0.0	4482.1
	24	0.0	2910.3	0.0	-8.3	0.0	-6496.0
SLD +	20	0.0	3343.0	0.0	8.3	0.0	6490.3
	24	0.0	3344.3	0.0	8.0	0.0	-4487.8
SLO -	20	0.0	2879.1	0.0	-9.2	0.0	4345.9
	24	0.0	2880.3	0.0	-9.4	0.0	-6632.2
SLO +	20	0.0	3373.0	0.0	9.4	0.0	6626.5
	24	0.0	3374.3	0.0	9.2	0.0	-4351.6
SLU Statiche -	24	0.0	3871.9	0.0	-5.2	0.0	6579.7

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
	15	0.0	3125.3	0.0	-15.7	0.0	-8301.7
SLU Statiche +	24	0.0	5004.1	0.0	15.7	0.0	8070.8
	15	0.0	4257.4	0.0	5.2	0.0	321.2
SLV -	24	0.0	2203.6	0.0	-143.2	0.0	3818.7
	15	0.0	1695.9	0.0	-150.6	0.0	-12128.7
SLV +	24	0.0	4557.4	0.0	150.6	0.0	7237.9
	15	0.0	4049.7	0.0	143.2	0.0	5607.7
SLE Rare -	24	0.0	3032.0	0.0	-3.0	0.0	5123.6
	15	0.0	2466.6	0.0	-11.0	0.0	-5969.2
SLE Rare +	24	0.0	3786.8	0.0	11.0	0.0	6117.6
	15	0.0	3221.3	0.0	3.0	0.0	-220.6
SLE Frequenti -	24	0.0	3305.0	0.0	2.3	0.0	5428.9
	15	0.0	2797.3	0.0	-5.1	0.0	-3835.4
SLE Frequenti +	24	0.0	3456.0	0.0	5.1	0.0	5627.7
	15	0.0	2948.3	0.0	-2.3	0.0	-2685.6
SLE Quasi Permanenti -	24	0.0	3380.5	0.0	3.7	0.0	5528.3
	15	0.0	2872.8	0.0	-3.7	0.0	-3260.5
SLE Quasi Permanenti +	24	0.0	3380.5	0.0	3.7	0.0	5528.3
	15	0.0	2872.8	0.0	-3.7	0.0	-3260.5
SLD -	24	0.0	2635.9	0.0	-90.9	0.0	4486.6
	15	0.0	2128.2	0.0	-98.2	0.0	-8904.6
SLD +	24	0.0	4125.1	0.0	98.2	0.0	6570.0
	15	0.0	3617.4	0.0	90.9	0.0	2383.6
SLO -	24	0.0	2531.2	0.0	-104.3	0.0	4345.0
	15	0.0	2023.5	0.0	-111.6	0.0	-9700.8
SLO +	24	0.0	4229.8	0.0	111.6	0.0	6711.6
	15	0.0	3722.1	0.0	104.3	0.0	3179.8
SLU Statiche -	6	0.0	4513.2	0.0	-1216.9	0.0	6393.9
	8	0.0	4308.6	0.0	-1122.3	0.0	-9168.5
SLU Statiche +	6	0.0	5246.4	0.0	1122.3	0.0	10445.7
	8	0.0	5041.7	0.0	1216.9	0.0	-5522.8
SLV -	6	0.0	1758.0	0.0	-1547.9	0.0	-3633.9
	8	0.0	1563.2	0.0	-1478.6	0.0	-16496.7
SLV +	6	0.0	5786.8	0.0	1478.6	0.0	16788.9
	8	0.0	5592.0	0.0	1547.9	0.0	5386.8
SLE Rare -	6	0.0	3511.8	0.0	-815.9	0.0	5139.6
	8	0.0	3349.4	0.0	-743.6	0.0	-6853.0
SLE Rare +	6	0.0	4000.6	0.0	743.6	0.0	7840.8
	8	0.0	3838.2	0.0	815.9	0.0	-4422.5
SLE Frequenti -	6	0.0	3723.5	0.0	-190.6	0.0	6307.4
	8	0.0	3528.7	0.0	-121.3	0.0	-5798.0
SLE Frequenti +	6	0.0	3821.3	0.0	121.3	0.0	6847.7
	8	0.0	3626.5	0.0	190.6	0.0	-5311.9
SLE Quasi Permanenti -	6	0.0	3772.4	0.0	-34.7	0.0	6577.5
	8	0.0	3577.6	0.0	34.7	0.0	-5555.0
SLE Quasi Permanenti +	6	0.0	3772.4	0.0	-34.7	0.0	6577.5
	8	0.0	3577.6	0.0	34.7	0.0	-5555.0
SLD -	6	0.0	2471.0	0.0	-1012.1	0.0	-17.9
	8	0.0	2276.2	0.0	-942.8	0.0	-12625.6
SLD +	6	0.0	5073.8	0.0	942.8	0.0	13173.0
	8	0.0	4879.0	0.0	1012.1	0.0	1515.7
SLO -	6	0.0	2286.6	0.0	-1150.8	0.0	-952.1
	8	0.0	2091.8	0.0	-1081.5	0.0	-13627.5
SLO +	6	0.0	5258.2	0.0	1081.5	0.0	14107.2
	8	0.0	5063.4	0.0	1150.8	0.0	2517.6

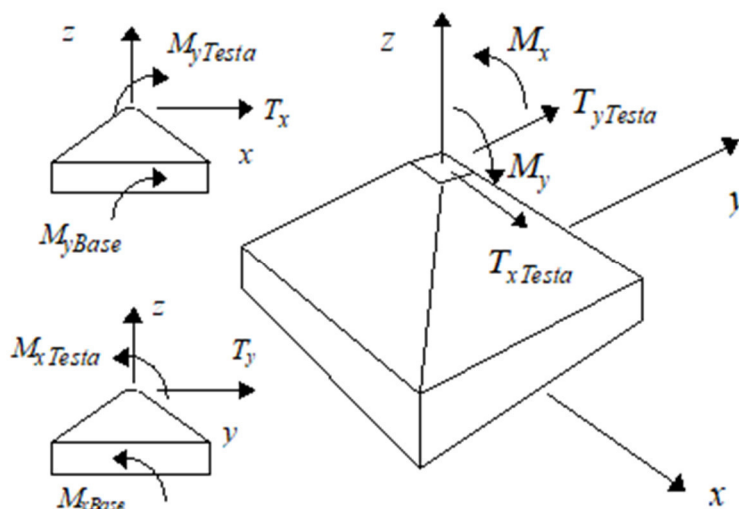
Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
SLU Statiche -	8	0.0	1755.1	0.0	-0.0	0.0	1186.0
	10	0.0	1755.1	0.0	-0.0	0.0	-6312.6
SLU Statiche +	8	0.0	3522.9	0.0	0.0	0.0	6312.6
	10	0.0	3522.9	0.0	0.0	0.0	-1186.1
SLV -	8	0.0	-4198.9	0.0	-13.4	0.0	-15226.6
	10	0.0	-4199.0	0.0	-13.4	0.0	-20947.7
SLV +	8	0.0	8259.0	0.0	13.4	0.0	20947.0
	10	0.0	8258.9	0.0	13.4	0.0	15227.4
SLE Rare -	8	0.0	1440.7	0.0	-0.0	0.0	1172.0
	10	0.0	1440.7	0.0	-0.0	0.0	-4589.8
SLE Rare +	8	0.0	2619.3	0.0	0.0	0.0	4589.7
	10	0.0	2619.3	0.0	0.0	0.0	-1172.1
SLE Frequenti -	8	0.0	1912.1	0.0	0.0	0.0	2518.4
	10	0.0	1912.2	0.0	-0.0	0.0	-3202.0
SLE Frequenti +	8	0.0	2147.8	0.0	0.0	0.0	3201.9
	10	0.0	2147.9	0.0	-0.0	0.0	-2518.4
SLE Quasi Permanenti -	8	0.0	2030.0	0.0	0.0	0.0	2860.2
	10	0.0	2030.0	0.0	-0.0	0.0	-2860.2
SLE Quasi Permanenti +	8	0.0	2030.0	0.0	0.0	0.0	2860.2
	10	0.0	2030.0	0.0	-0.0	0.0	-2860.2
SLD -	8	0.0	-1995.8	0.0	-8.5	0.0	-8824.1
	10	0.0	-1995.8	0.0	-8.5	0.0	-14545.0
SLD +	8	0.0	6055.8	0.0	8.5	0.0	14544.5
	10	0.0	6055.8	0.0	8.5	0.0	8824.6
SLO -	8	0.0	-2564.5	0.0	-9.6	0.0	-10474.2
	10	0.0	-2564.5	0.0	-9.6	0.0	-16195.2
SLO +	8	0.0	6624.5	0.0	9.6	0.0	16194.6
	10	0.0	6624.5	0.0	9.6	0.0	10474.8
SLU Statiche -	10	0.0	4308.7	0.0	-1122.1	0.0	5522.9
	16	0.0	4513.2	0.0	-1217.1	0.0	-10445.7
SLU Statiche +	10	0.0	5041.8	0.0	1217.1	0.0	9168.6
	16	0.0	5246.3	0.0	1122.1	0.0	-6393.8
SLV -	10	0.0	1563.2	0.0	-1480.7	0.0	-5387.1
	16	0.0	1758.0	0.0	-1550.3	0.0	-16789.1
SLV +	10	0.0	5592.0	0.0	1550.3	0.0	16497.1
	16	0.0	5786.8	0.0	1480.7	0.0	3634.2
SLE Rare -	10	0.0	3349.5	0.0	-743.4	0.0	4422.6
	16	0.0	3511.8	0.0	-816.1	0.0	-7840.8
SLE Rare +	10	0.0	3838.2	0.0	816.1	0.0	6853.1
	16	0.0	4000.5	0.0	743.4	0.0	-5139.5
SLE Frequenti -	10	0.0	3528.7	0.0	-121.1	0.0	5312.0
	16	0.0	3723.5	0.0	-190.8	0.0	-6847.6
SLE Frequenti +	10	0.0	3626.5	0.0	190.8	0.0	5798.1
	16	0.0	3821.2	0.0	121.1	0.0	-6307.4
SLE Quasi Permanenti -	10	0.0	3577.6	0.0	34.8	0.0	5555.0
	16	0.0	3772.4	0.0	-34.8	0.0	-6577.5
SLE Quasi Permanenti +	10	0.0	3577.6	0.0	34.8	0.0	5555.0
	16	0.0	3772.4	0.0	-34.8	0.0	-6577.5
SLD -	10	0.0	2276.2	0.0	-944.1	0.0	-1515.7
	16	0.0	2470.9	0.0	-1013.7	0.0	-13173.0
SLD +	10	0.0	4879.1	0.0	1013.7	0.0	12625.8
	16	0.0	5073.8	0.0	944.1	0.0	18.1
SLO -	10	0.0	2091.8	0.0	-1083.0	0.0	-2517.7
	16	0.0	2286.6	0.0	-1152.6	0.0	-14107.2

Comb.	Nodo	N [kg]	T1-2 [kg]	T1-3 [kg]	Mt [kgm]	M1-3 [kgm]	M1-2 [kgm]
SLO +	10	0.0	5063.4	0.0	1152.6	0.0	13627.7
	16	0.0	5258.2	0.0	1083.0	0.0	952.3

Sollecitazioni nei plinti

Convenzioni adottate

L'elemento, con riferimento al piano **x-y**, risulta essere così disposto:



Per ogni plinto vengono riportati i valori dello Sforzo normale sulla testa del plinto i valori del taglio (dedotti a partire da quelli trasmessi al plinto dal pilastro sovrastante), i momenti alla base del plinto e le tensioni correlative indotte sul terreno. Per quanto riguarda i momenti alla base del plinto valgono, indicando con **H_p** l'altezza del plinto dalla quota di fondazione a quella di imposta del pilastro sovrastante:

$$M_{xBase} = M_{xTesta} + T_y \times H_{Plinto}$$

$$M_{yBase} = M_{yTesta} - T_x \times H_{Plinto}$$

La tensione sul terreno viene calcolata in pressoflessione deviata su una sezione d'impronta di forma rettangolare eventualmente parzializzata.

Nodo	Comb.	N [kg]	Tx [kg]	Ty [kg]	Mx [kgm]	My [kgm]	σ_{ter} [kg/cm ²]	Rib.
1	SLU Statiche -	-181026.2	-4679.0	-4682.6	-13999.1	-13412.7	0.9	
	SLU Statiche +	-175709.2	1397.5	1337.5	13857.9	13723.3	0.9	
	SLV -	-154826.0	-9824.7	-8195.9	-47514.0	-63606.7	0.7	
	SLV +	-110243.3	7304.6	5619.4	47234.5	63635.6	1.2	
	SLE Rare -	-138355.5	-3287.4	-3293.5	-9351.3	-8939.9	0.7	
	SLE Rare +	-134810.8	763.6	719.9	9220.0	9150.7	0.7	
	SLE Frequenti -	-133543.6	-1665.2	-1689.5	-1996.8	-1794.8	0.6	
	SLE Frequenti +	-132485.9	-855.0	-886.8	1717.5	1823.3	0.6	
	SLE Quasi Permanenti -	-132535.1	-1260.1	-1288.2	-139.7	14.2	0.6	
	SLE Quasi Permanenti +	-132535.1	-1260.1	-1288.2	-139.7	14.2	0.6	
	SLD -	-138836.6	-6664.0	-5624.1	-30536.5	-40912.7	0.7	
	SLD +	-126233.1	4143.9	3047.7	30257.1	40941.4	1.0	
	SLO -	-139332.3	-7399.7	-6197.5	-34765.2	-46662.2	0.7	
	SLO +	-125737.3	4879.6	3621.0	34485.7	46690.9	1.0	
2	SLU Statiche -	-227994.9	-610.0	-10616.0	-31417.5	-2611.5	1.1	

Nodo	Comb.	N [kg]	Tx [kg]	Ty [kg]	Mx [kgm]	My [kgm]	σ_{ter} [kg/cm ²]	Rib.
	SLU Statiche +	-217768.1	565.2	4429.0	51253.7	5224.3	1.4	
	SLV -	-188992.0	-8600.6	-11126.3	-63015.8	-53524.3	0.8	
	SLV +	-135427.8	8569.4	6361.1	77957.3	55347.0	1.4	
	SLE Rare -	-173624.6	-408.8	-7395.0	-19948.9	-1619.4	0.8	
	SLE Rare +	-166806.8	374.7	2635.0	35165.3	3604.4	1.0	
	SLE Frequenti -	-164199.1	-93.8	-3385.6	1959.4	389.3	0.8	
	SLE Frequenti +	-162134.7	62.9	-1379.6	12982.2	1434.0	0.9	
	SLE Quasi Permanenti -	-162209.9	-15.5	-2382.6	7470.8	911.7	0.8	
	SLE Quasi Permanenti +	-162209.9	-15.5	-2382.6	7470.8	911.7	0.8	
	SLD -	-169218.7	-5419.9	-7896.0	-37976.4	-34019.7	0.8	
	SLD +	-155201.2	5388.8	3130.7	52917.9	35842.7	1.2	
	SLO -	-169710.9	-6142.7	-8646.1	-44370.1	-38889.2	0.8	
	SLO +	-154708.9	6111.6	3880.9	59311.6	40712.2	1.2	
3	SLU Statiche -	-228486.1	-579.6	-10627.2	-31771.9	-4270.4	1.1	
	SLU Statiche +	-218186.4	583.7	4417.8	51929.9	4137.7	1.4	
	SLV -	-188954.1	-8491.0	-11275.5	-65637.3	-54746.2	0.8	
	SLV +	-136064.3	8493.7	6493.0	80822.6	54653.7	1.4	
	SLE Rare -	-173992.0	-386.2	-7403.6	-20168.9	-2853.1	0.9	
	SLE Rare +	-167125.5	389.3	2626.4	35632.3	2752.3	1.0	
	SLE Frequenti -	-164509.6	-76.1	-3394.2	2012.5	-606.5	0.8	
	SLE Frequenti +	-162432.3	79.0	-1388.2	13172.8	514.6	0.8	
	SLE Quasi Permanenti -	-162509.3	1.5	-2391.2	7592.6	-45.9	0.8	
	SLE Quasi Permanenti +	-162509.3	1.5	-2391.2	7592.6	-45.9	0.8	
	SLD -	-169412.9	-5372.2	-7995.3	-39629.9	-35214.1	0.8	
	SLD +	-155605.5	5375.1	3212.8	54815.1	35121.9	1.2	
	SLO -	-169895.6	-6092.6	-8758.3	-46275.9	-40122.0	0.9	
	SLO +	-155122.9	6095.4	3975.8	61461.2	40029.8	1.2	
4	SLU Statiche -	-228486.1	-583.7	-10627.2	-31771.9	-4137.7	1.1	
	SLU Statiche +	-218186.4	579.6	4417.8	51929.9	4270.4	1.4	
	SLV -	-188954.3	-8493.9	-11275.5	-65637.3	-54654.3	0.8	
	SLV +	-136064.4	8490.7	6493.0	80822.6	54745.5	1.4	
	SLE Rare -	-173992.0	-389.3	-7403.6	-20168.9	-2752.3	0.9	
	SLE Rare +	-167125.5	386.2	2626.4	35632.3	2853.1	1.0	
	SLE Frequenti -	-164509.6	-79.0	-3394.2	2012.5	-514.6	0.8	
	SLE Frequenti +	-162432.3	76.1	-1388.2	13172.8	606.5	0.8	
	SLE Quasi Permanenti -	-162509.3	-1.5	-2391.2	7592.6	45.9	0.8	
	SLE Quasi Permanenti +	-162509.3	-1.5	-2391.2	7592.6	45.9	0.8	
	SLD -	-169413.0	-5375.2	-7995.3	-39629.9	-35122.2	0.8	
	SLD +	-155605.6	5372.1	3212.8	54815.1	35213.8	1.2	
	SLO -	-169895.7	-6095.6	-8758.3	-46275.9	-40030.1	0.9	
	SLO +	-155122.9	6092.4	3975.8	61461.2	40121.6	1.2	
5	SLU Statiche -	-227994.9	-565.2	-10616.0	-31417.5	-5224.3	1.1	
	SLU Statiche +	-217768.1	610.0	4429.0	51253.7	2611.5	1.4	
	SLV -	-188992.0	-8569.7	-11126.3	-63015.8	-55347.7	0.8	
	SLV +	-135427.9	8600.3	6361.0	77957.3	53523.7	1.4	
	SLE Rare -	-173624.6	-374.7	-7395.0	-19948.9	-3604.4	0.8	
	SLE Rare +	-166806.8	408.8	2635.0	35165.3	1619.4	1.0	
	SLE Frequenti -	-164199.1	-62.9	-3385.6	1959.4	-1434.1	0.8	
	SLE Frequenti +	-162134.7	93.8	-1379.6	12982.2	-389.3	0.9	
	SLE Quasi Permanenti -	-162209.9	15.5	-2382.6	7470.8	-911.7	0.8	
	SLE Quasi Permanenti +	-162209.9	15.5	-2382.6	7470.8	-911.7	0.8	
	SLD -	-169218.7	-5389.0	-7896.0	-37976.4	-35843.1	0.8	
	SLD +	-155201.2	5419.8	3130.7	52917.9	34019.4	1.2	

Nodo	Comb.	N [kg]	Tx [kg]	Ty [kg]	Mx [kgm]	My [kgm]	σ_{ter} [kg/cm ²]	Rib.
	SLO -	-169711.0	-6111.8	-8646.1	-44370.1	-40712.6	0.8	
	SLO +	-154709.0	6142.5	3880.9	59311.6	38888.9	1.2	
6	SLU Statiche -	-181026.2	-1397.5	-4682.6	-13999.1	-13723.3	0.9	
	SLU Statiche +	-175709.2	4679.0	1337.5	13857.9	13412.7	0.9	
	SLV -	-154826.8	-7304.3	-8195.4	-47513.5	-63635.1	0.7	
	SLV +	-110244.1	9824.7	5619.2	47234.3	63607.0	1.2	
	SLE Rare -	-138355.5	-763.6	-3293.5	-9351.3	-9150.7	0.7	
	SLE Rare +	-134810.8	3287.4	719.9	9220.0	8939.9	0.7	
	SLE Frequenti -	-133543.6	855.0	-1689.5	-1996.8	-1823.3	0.6	
	SLE Frequenti +	-132485.9	1665.2	-886.8	1717.5	1794.8	0.6	
	SLE Quasi Permanenti -	-132535.0	1260.1	-1288.2	-139.7	-14.2	0.6	
	SLE Quasi Permanenti +	-132535.0	1260.1	-1288.2	-139.7	-14.2	0.6	
	SLD -	-138837.0	-4143.7	-5623.8	-30536.1	-40941.2	0.7	
	SLD +	-126233.6	6664.1	3047.5	30256.8	40912.9	1.0	
	SLO -	-139332.8	-4879.4	-6197.1	-34764.7	-46690.6	0.7	
	SLO +	-125737.8	7399.8	3620.8	34485.4	46662.4	1.0	
7	SLU Statiche -	-102344.1	-6566.3	-616.6	-1230.0	-38576.8	0.8	
	SLU Statiche +	-101309.4	6566.2	885.8	5622.6	38859.3	1.4	
	SLV -	-92039.5	-5135.2	-6286.1	-24662.3	-38383.0	0.8	
	SLV +	-64579.6	5135.1	6487.7	27953.7	38597.1	1.4	
	SLE Rare -	-78670.7	-4377.5	-397.6	-600.6	-25703.6	0.6	
	SLE Rare +	-77980.9	4377.5	604.0	3967.8	25920.5	1.0	
	SLE Frequenti -	-78378.6	-875.5	0.7	1188.8	-5055.4	0.7	
	SLE Frequenti +	-78240.6	875.5	201.0	2102.5	5269.5	0.7	
	SLE Quasi Permanenti -	-78309.6	-0.0	100.9	1645.6	107.0	0.7	
	SLE Quasi Permanenti +	-78309.6	-0.0	100.9	1645.6	107.0	0.7	
	SLD -	-82393.8	-3228.9	-3898.7	-15136.3	-24630.6	0.8	
	SLD +	-74225.3	3228.9	4100.4	18427.6	24844.6	1.1	
	SLO -	-82877.4	-3665.9	-4418.0	-17425.3	-28100.3	0.8	
	SLO +	-73741.7	3665.9	4619.7	20716.6	28314.4	1.2	
8	SLU Statiche -	-102344.1	-6566.3	-616.6	-1230.0	-38859.3	0.8	
	SLU Statiche +	-101309.4	6566.3	885.8	5622.6	38576.8	1.4	
	SLV -	-92039.3	-5137.1	-6285.7	-24662.3	-38594.4	0.8	
	SLV +	-64579.9	5137.0	6487.5	27953.5	38380.0	1.4	
	SLE Rare -	-78670.7	-4377.5	-397.6	-600.6	-25920.5	0.6	
	SLE Rare +	-77980.9	4377.5	604.0	3967.8	25703.6	1.0	
	SLE Frequenti -	-78378.6	-875.5	0.7	1188.8	-5269.5	0.7	
	SLE Frequenti +	-78240.6	875.5	201.0	2102.5	5055.4	0.7	
	SLE Quasi Permanenti -	-78309.6	0.0	100.9	1645.6	-107.1	0.7	
	SLE Quasi Permanenti +	-78309.6	0.0	100.9	1645.6	-107.1	0.7	
	SLD -	-82393.7	-3229.7	-3898.4	-15136.3	-24838.5	0.8	
	SLD +	-74225.5	3229.6	4100.2	18427.6	24624.2	1.1	
	SLO -	-82877.3	-3666.7	-4417.7	-17425.3	-28307.6	0.8	
	SLO +	-73742.0	3666.6	4619.5	20716.6	28093.3	1.2	
9	SLU Statiche -	-102344.2	-6566.3	-885.8	-5622.7	-38576.6	0.8	
	SLU Statiche +	-101309.5	6566.2	616.6	1229.9	38859.4	1.4	
	SLV -	-92039.6	-5135.6	-6487.6	-27953.7	-38384.0	0.8	
	SLV +	-64579.7	5135.5	6285.8	24662.3	38598.3	1.4	
	SLE Rare -	-78670.7	-4377.5	-604.0	-3967.9	-25703.5	0.6	
	SLE Rare +	-77980.9	4377.5	397.6	600.5	25920.6	1.0	
	SLE Frequenti -	-78378.6	-875.5	-201.0	-2102.5	-5055.2	0.7	
	SLE Frequenti +	-78240.7	875.5	-0.7	-1188.8	5269.6	0.7	

Nodo	Comb.	N [kg]	Tx [kg]	Ty [kg]	Mx [kgm]	My [kgm]	σ_{ter} [kg/cm ²]	Rib.
	SLE Quasi Permanenti -	-78309.6	-0.0	-100.9	-1645.7	107.2	0.7	
	SLE Quasi Permanenti +	-78309.6	-0.0	-100.9	-1645.7	107.2	0.7	
	SLD -	-82393.9	-3229.2	-4100.3	-18427.6	-24630.9	0.8	
	SLD +	-74225.4	3226.1	3898.5	15136.3	24839.6	1.1	
	SLO -	-82877.5	-3666.1	-4619.6	-20716.7	-28100.7	0.8	
	SLO +	-73741.8	3666.1	4417.8	17425.3	28315.0	1.2	
10	SLU Statiche -	-102344.2	-6566.3	-885.8	-5622.7	-38859.4	0.8	
	SLU Statiche +	-101309.5	6566.3	616.6	1229.9	38576.6	1.4	
	SLV -	-92039.8	-5137.6	-6487.9	-27953.7	-38596.4	0.8	
	SLV +	-64579.5	5137.5	6286.1	24662.4	38381.7	1.4	
	SLE Rare -	-78670.7	-4377.5	-604.0	-3967.9	-25920.6	0.6	
	SLE Rare +	-77980.9	4377.5	397.6	600.5	25703.5	1.0	
	SLE Frequenti -	-78378.6	-875.5	-201.0	-2102.5	-5269.6	0.7	
	SLE Frequenti +	-78240.7	875.5	-0.7	-1188.8	5055.2	0.7	
	SLE Quasi Permanenti -	-78309.6	0.0	-100.9	-1645.7	-107.2	0.7	
	SLE Quasi Permanenti +	-78309.6	0.0	-100.9	-1645.7	-107.2	0.7	
	SLD -	-82394.0	-3230.0	-4100.5	-18427.7	-24839.7	0.8	
	SLD +	-74225.3	3229.9	3898.7	15136.3	24625.2	1.1	
	SLO -	-82877.6	-3667.0	-4619.8	-20716.7	-28308.9	0.8	
	SLO +	-73741.6	3667.0	4418.1	17425.3	28094.4	1.2	
11	SLU Statiche -	-181029.3	-4679.3	-1337.5	-13858.2	-13400.5	0.9	
	SLU Statiche +	-175712.2	1397.2	4682.6	13998.8	13735.4	0.9	
	SLV -	-154833.6	-9870.8	-5619.2	-47234.4	-64005.2	0.7	
	SLV +	-110240.3	7350.4	8195.5	47513.2	64052.8	1.2	
	SLE Rare -	-138357.8	-3287.5	-719.9	-9220.2	-8930.5	0.7	
	SLE Rare +	-134813.1	763.4	3293.5	9351.1	9160.1	0.7	
	SLE Frequenti -	-133545.9	-1665.4	886.8	-1717.7	-1785.5	0.6	
	SLE Frequenti +	-132488.3	-855.2	1689.5	1996.6	1832.7	0.6	
	SLE Quasi Permanenti -	-132537.4	-1260.3	1288.2	139.5	23.6	0.6	
	SLE Quasi Permanenti +	-132537.4	-1260.3	1288.2	139.5	23.6	0.6	
	SLD -	-138841.6	-6694.3	-3047.5	-30257.0	-41168.4	0.7	
	SLD +	-126232.7	4173.8	5623.8	30535.9	41215.8	1.0	
	SLO -	-139337.8	-7434.1	-3620.9	-34485.6	-46955.4	0.7	
	SLO +	-125736.5	4913.6	6197.2	34764.4	47002.9	1.0	
12	SLU Statiche -	-228346.2	-610.5	-4429.0	-51265.0	-2588.9	1.1	
	SLU Statiche +	-218119.4	564.8	10616.0	31406.3	5246.9	1.4	
	SLV -	-189220.0	-8636.1	-6359.1	-77963.8	-53830.0	0.8	
	SLV +	-135740.7	8604.2	11124.4	63004.9	55687.5	1.4	
	SLE Rare -	-173894.8	-409.1	-2635.0	-35173.9	-1602.0	0.8	
	SLE Rare +	-167077.0	374.4	7395.0	19940.3	3621.8	1.0	
	SLE Frequenti -	-164469.3	-94.2	1379.6	-12990.8	406.7	0.8	
	SLE Frequenti +	-162404.9	62.5	3385.6	-1968.0	1451.4	0.9	
	SLE Quasi Permanenti -	-162480.1	-15.8	2382.6	-7479.4	929.1	0.8	
	SLE Quasi Permanenti +	-162480.1	-15.8	2382.6	-7479.4	929.1	0.8	
	SLD -	-169480.2	-5444.8	-3129.7	-52925.8	-34213.9	0.8	
	SLD +	-155480.3	5413.1	7895.0	37967.0	36071.7	1.2	
	SLO -	-169972.2	-6171.8	-3879.7	-59319.5	-39114.6	0.9	
	SLO +	-154988.3	6140.1	8645.0	44360.7	40972.3	1.2	
13	SLU Statiche -	-229185.5	-579.8	-4417.8	-51952.1	-4259.1	1.1	
	SLU Statiche +	-218885.8	583.5	10627.2	31749.7	4149.0	1.4	
	SLV -	-189558.4	-8014.0	-6202.8	-80567.3	-54144.4	0.8	
	SLV +	-136536.6	8016.8	10985.3	65347.9	54070.2	1.4	

Nodo	Comb.	N [kg]	Tx [kg]	Ty [kg]	Mx [kgm]	My [kgm]	σ_{ter} [kg/cm ²]	Rib.
	SLE Rare -	-174530.0	-386.3	-2626.4	-35649.4	-2844.3	0.9	
	SLE Rare +	-167663.5	389.2	7403.6	20151.8	2761.1	1.0	
	SLE Frequenti -	-165047.6	-76.2	1388.2	-13189.8	-597.8	0.8	
	SLE Frequenti +	-162970.3	78.9	3394.2	-2029.6	523.3	0.9	
	SLE Quasi Permanenti -	-163047.3	1.3	2391.2	-7609.7	-37.2	0.8	
	SLE Quasi Permanenti +	-163047.3	1.3	2391.2	-7609.7	-37.2	0.8	
	SLD -	-169980.8	-5133.7	-3077.8	-54703.2	-34967.7	0.8	
	SLD +	-156114.0	5136.4	7860.3	39483.8	34893.3	1.2	
	SLO -	-170466.4	-5845.3	-3833.5	-61353.5	-39895.1	0.9	
	SLO +	-155628.4	5848.0	8616.0	46134.1	39820.8	1.2	
14	SLU Statiche -	-229185.5	-583.5	-4417.8	-51952.1	-4149.0	1.1	
	SLU Statiche +	-218885.8	579.8	10627.2	31749.7	4259.1	1.4	
	SLV -	-189557.9	-8016.6	-6202.6	-80567.7	-54070.0	0.8	
	SLV +	-136536.2	8014.1	10985.3	65347.9	54144.7	1.4	
	SLE Rare -	-174530.0	-389.2	-2626.4	-35649.4	-2761.1	0.9	
	SLE Rare +	-167663.5	386.3	7403.6	20151.8	2844.4	1.0	
	SLE Frequenti -	-165047.6	-78.9	1388.2	-13189.8	-523.3	0.8	
	SLE Frequenti +	-162970.3	76.2	3394.2	-2029.6	597.8	0.9	
	SLE Quasi Permanenti -	-163047.3	-1.3	2391.2	-7609.7	37.2	0.8	
	SLE Quasi Permanenti +	-163047.3	-1.3	2391.2	-7609.7	37.2	0.8	
	SLD -	-169980.6	-5136.3	-3077.8	-54703.2	-34893.2	0.8	
	SLD +	-156113.7	5133.8	7860.3	39483.8	34967.8	1.2	
	SLO -	-170466.1	-5848.0	-3833.5	-61353.5	-39820.7	0.9	
	SLO +	-155628.1	5845.4	8616.0	46134.1	39895.2	1.2	
15	SLU Statiche -	-228346.2	-564.8	-4429.0	-51265.0	-5246.9	1.1	
	SLU Statiche +	-218119.4	610.5	10616.0	31406.3	2588.9	1.4	
	SLV -	-189219.6	-8604.5	-6359.1	-77963.7	-55688.2	0.8	
	SLV +	-135740.3	8635.8	11124.4	63004.9	53829.5	1.4	
	SLE Rare -	-173894.8	-374.4	-2635.0	-35173.9	-3621.8	0.8	
	SLE Rare +	-167077.0	409.1	7395.0	19940.3	1602.0	1.0	
	SLE Frequenti -	-164469.3	-62.5	1379.6	-12990.8	-1451.4	0.8	
	SLE Frequenti +	-162404.9	94.2	3385.6	-1968.0	-406.7	0.9	
	SLE Quasi Permanenti -	-162480.1	15.8	2382.6	-7479.4	-929.1	0.8	
	SLE Quasi Permanenti +	-162480.1	15.8	2382.6	-7479.4	-929.1	0.8	
	SLD -	-169480.0	-5413.2	-3129.7	-52925.8	-36072.1	0.8	
	SLD +	-155480.0	5444.7	7895.0	37967.0	34213.6	1.2	
	SLO -	-169972.0	-6140.2	-3879.7	-59319.5	-40972.7	0.9	
	SLO +	-154988.0	6171.7	8645.0	44360.7	39114.3	1.2	
16	SLU Statiche -	-181029.2	-1397.2	-1337.5	-13858.2	-13735.4	0.9	
	SLU Statiche +	-175712.2	4679.3	4682.6	13998.8	13400.5	0.9	
	SLV -	-154834.4	-7350.1	-5619.5	-47234.6	-64052.3	0.7	
	SLV +	-110241.1	9870.9	8195.9	47513.7	64005.5	1.2	
	SLE Rare -	-138357.8	-763.4	-719.9	-9220.2	-9160.1	0.7	
	SLE Rare +	-134813.1	3287.5	3293.5	9351.1	8930.5	0.7	
	SLE Frequenti -	-133545.9	855.2	886.8	-1717.7	-1832.7	0.6	
	SLE Frequenti +	-132488.3	1665.4	1689.5	1996.6	1785.5	0.6	
	SLE Quasi Permanenti -	-132537.4	1260.3	1288.2	139.5	-23.6	0.6	
	SLE Quasi Permanenti +	-132537.4	1260.3	1288.2	139.5	-23.6	0.6	
	SLD -	-138842.1	-4173.6	-3047.7	-30257.2	-41215.5	0.7	
	SLD +	-126233.1	6694.3	5624.0	30536.2	41168.6	1.0	
	SLO -	-139338.3	-4913.4	-3621.1	-34485.9	-47002.6	0.7	
	SLO +	-125736.9	7434.2	6197.4	34764.9	46955.6	1.0	

Nodo	Comb.	N [kg]	Tx [kg]	Ty [kg]	Mx [kgm]	My [kgm]	σ_{ter} [kg/cm ²]	Rib.
17	SLU Statiche -	-11098.0	0.0	0.0	22.8	-5.4	0.7	
	SLU Statiche +	-9645.5	0.0	0.0	83.0	15.6	0.8	
	SLV -	-9793.1	0.0	0.0	-30.2	-140.5	0.4	
	SLV +	-6096.8	0.0	0.0	102.6	147.6	0.7	
	SLE Rare -	-8458.0	0.0	0.0	20.0	-3.1	0.5	
	SLE Rare +	-7489.6	0.0	0.0	60.1	10.8	0.6	
	SLE Frequenti -	-8041.8	0.0	0.0	32.2	2.1	0.6	
	SLE Frequenti +	-7848.1	0.0	0.0	40.2	4.9	0.6	
	SLE Quasi Permanenti -	-7944.9	0.0	0.0	36.2	3.5	0.6	
	SLE Quasi Permanenti +	-7944.9	0.0	0.0	36.2	3.5	0.6	
	SLD -	-9013.5	0.0	0.0	-4.4	-89.2	0.5	
	SLD +	-6876.4	0.0	0.0	76.9	96.3	0.7	
	SLO -	-9156.4	0.0	0.0	-10.1	-102.3	0.5	
	SLO +	-6733.4	0.0	0.0	82.6	109.4	0.7	
18	SLU Statiche -	-11110.7	0.0	0.0	22.4	-11.8	0.7	
	SLU Statiche +	-9630.5	0.0	0.0	83.7	11.3	0.8	
	SLV -	-9868.6	0.0	0.0	-32.5	-144.9	0.4	
	SLV +	-6019.2	0.0	0.0	105.3	144.5	0.7	
	SLE Rare -	-8466.3	0.0	0.0	19.8	-7.9	0.5	
	SLE Rare +	-7479.5	0.0	0.0	60.7	7.5	0.6	
	SLE Frequenti -	-8042.6	0.0	0.0	32.3	-1.7	0.6	
	SLE Frequenti +	-7845.2	0.0	0.0	40.5	1.4	0.6	
	SLE Quasi Permanenti -	-7943.9	0.0	0.0	36.4	-0.2	0.6	
	SLE Quasi Permanenti +	-7943.9	0.0	0.0	36.4	-0.2	0.6	
	SLD -	-9061.0	0.0	0.0	-6.0	-93.8	0.5	
	SLD +	-6826.9	0.0	0.0	78.7	93.5	0.7	
	SLO -	-9210.5	0.0	0.0	-11.8	-107.1	0.5	
	SLO +	-6677.3	0.0	0.0	84.6	106.7	0.7	
19	SLU Statiche -	-11110.7	0.0	0.0	22.4	-11.3	0.7	
	SLU Statiche +	-9630.5	0.0	0.0	83.7	11.8	0.8	
	SLV -	-9868.6	0.0	0.0	-32.5	-144.5	0.4	
	SLV +	-6019.3	0.0	0.0	105.3	144.9	0.7	
	SLE Rare -	-8466.3	0.0	0.0	19.8	-7.5	0.5	
	SLE Rare +	-7479.5	0.0	0.0	60.7	7.9	0.6	
	SLE Frequenti -	-8042.6	0.0	0.0	32.3	-1.4	0.6	
	SLE Frequenti +	-7845.2	0.0	0.0	40.5	1.7	0.6	
	SLE Quasi Permanenti -	-7943.9	0.0	0.0	36.4	0.2	0.6	
	SLE Quasi Permanenti +	-7943.9	0.0	0.0	36.4	0.2	0.6	
	SLD -	-9061.0	0.0	0.0	-6.0	-93.5	0.5	
	SLD +	-6826.9	0.0	0.0	78.7	93.8	0.7	
	SLO -	-9210.5	0.0	0.0	-11.8	-106.7	0.5	
	SLO +	-6677.3	0.0	0.0	84.6	107.1	0.7	
20	SLU Statiche -	-11098.0	0.0	0.0	22.8	-15.6	0.7	
	SLU Statiche +	-9645.5	0.0	0.0	83.0	5.4	0.8	
	SLV -	-9793.1	0.0	0.0	-30.2	-147.6	0.4	
	SLV +	-6096.8	0.0	0.0	102.6	140.5	0.7	
	SLE Rare -	-8458.0	0.0	0.0	20.0	-10.8	0.5	
	SLE Rare +	-7489.6	0.0	0.0	60.1	3.1	0.6	
	SLE Frequenti -	-8041.8	0.0	0.0	32.2	-4.9	0.6	
	SLE Frequenti +	-7848.1	0.0	0.0	40.2	-2.1	0.6	
	SLE Quasi Permanenti -	-7944.9	0.0	0.0	36.2	-3.5	0.6	
	SLE Quasi Permanenti +	-7944.9	0.0	0.0	36.2	-3.5	0.6	
	SLD -	-9013.5	0.0	0.0	-4.4	-96.3	0.5	

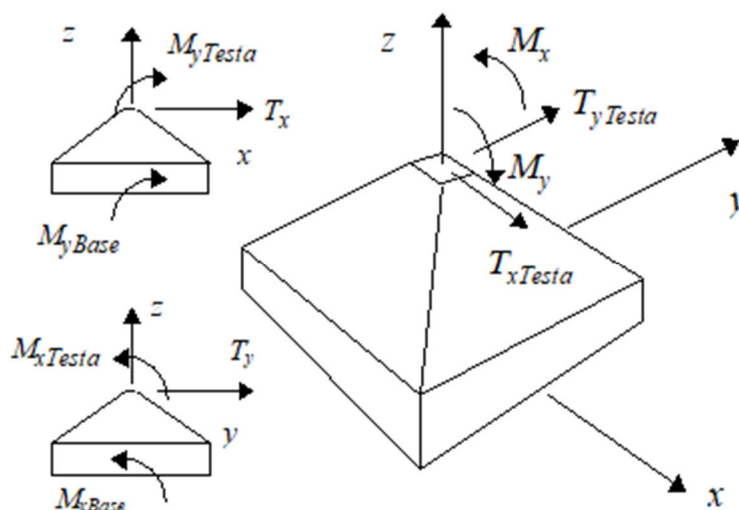
Nodo	Comb.	N [kg]	Tx [kg]	Ty [kg]	Mx [kgm]	My [kgm]	σ_{ter} [kg/cm ²]	Rib.
	SLD +	-6876.4	0.0	0.0	76.9	89.2	0.7	
	SLO -	-9156.4	0.0	0.0	-10.1	-109.4	0.5	
	SLO +	-6733.4	0.0	0.0	82.6	102.3	0.7	
21	SLU Statiche -	-11101.7	0.0	0.0	-83.2	-5.4	0.7	
	SLU Statiche +	-9649.2	0.0	0.0	-23.0	15.6	0.8	
	SLV -	-9794.5	0.0	0.0	-102.8	-140.8	0.4	
	SLV +	-6101.1	0.0	0.0	30.0	148.0	0.7	
	SLE Rare -	-8460.9	0.0	0.0	-60.3	-3.1	0.5	
	SLE Rare +	-7492.5	0.0	0.0	-20.2	10.9	0.6	
	SLE Frequenti -	-8044.7	0.0	0.0	-40.4	2.2	0.6	
	SLE Frequenti +	-7851.0	0.0	0.0	-32.4	5.0	0.6	
	SLE Quasi Permanenti -	-7947.8	0.0	0.0	-36.4	3.6	0.6	
	SLE Quasi Permanenti +	-7947.8	0.0	0.0	-36.4	3.6	0.6	
	SLD -	-9015.7	0.0	0.0	-77.1	-89.4	0.5	
	SLD +	-6880.0	0.0	0.0	4.3	96.5	0.7	
	SLO -	-9158.6	0.0	0.0	-82.7	-102.5	0.5	
	SLO +	-6737.1	0.0	0.0	9.9	109.7	0.7	
22	SLU Statiche -	-11118.2	0.0	0.0	-84.2	-11.8	0.7	
	SLU Statiche +	-9638.0	0.0	0.0	-22.9	11.4	0.8	
	SLV -	-9821.4	0.0	0.0	-106.1	-145.3	0.4	
	SLV +	-6078.0	0.0	0.0	32.7	145.0	0.7	
	SLE Rare -	-8472.1	0.0	0.0	-61.0	-7.9	0.5	
	SLE Rare +	-7485.3	0.0	0.0	-20.1	7.6	0.6	
	SLE Frequenti -	-8048.4	0.0	0.0	-40.8	-1.7	0.6	
	SLE Frequenti +	-7851.0	0.0	0.0	-32.6	1.4	0.6	
	SLE Quasi Permanenti -	-7949.7	0.0	0.0	-36.7	-0.2	0.6	
	SLE Quasi Permanenti +	-7949.7	0.0	0.0	-36.7	-0.2	0.6	
	SLD -	-9038.8	0.0	0.0	-79.3	-94.1	0.5	
	SLD +	-6860.6	0.0	0.0	5.9	93.8	0.7	
	SLO -	-9186.2	0.0	0.0	-85.2	-107.4	0.5	
	SLO +	-6713.1	0.0	0.0	11.8	107.1	0.7	
23	SLU Statiche -	-11118.2	0.0	0.0	-84.2	-11.4	0.7	
	SLU Statiche +	-9638.0	0.0	0.0	-22.9	11.8	0.8	
	SLV -	-9821.4	0.0	0.0	-106.1	-145.0	0.4	
	SLV +	-6078.0	0.0	0.0	32.7	145.3	0.7	
	SLE Rare -	-8472.1	0.0	0.0	-61.0	-7.6	0.5	
	SLE Rare +	-7485.3	0.0	0.0	-20.1	7.9	0.6	
	SLE Frequenti -	-8048.4	0.0	0.0	-40.8	-1.4	0.6	
	SLE Frequenti +	-7851.0	0.0	0.0	-32.6	1.7	0.6	
	SLE Quasi Permanenti -	-7949.7	0.0	0.0	-36.7	0.2	0.6	
	SLE Quasi Permanenti +	-7949.7	0.0	0.0	-36.7	0.2	0.6	
	SLD -	-9038.8	0.0	0.0	-79.3	-93.8	0.5	
	SLD +	-6860.6	0.0	0.0	5.9	94.1	0.7	
	SLO -	-9186.2	0.0	0.0	-85.2	-107.1	0.5	
	SLO +	-6713.1	0.0	0.0	11.8	107.4	0.7	
24	SLU Statiche -	-11101.7	0.0	0.0	-83.2	-15.6	0.7	
	SLU Statiche +	-9649.2	0.0	0.0	-23.0	5.4	0.8	
	SLV -	-9794.5	0.0	0.0	-102.8	-148.0	0.4	
	SLV +	-6101.1	0.0	0.0	30.0	140.8	0.7	
	SLE Rare -	-8460.9	0.0	0.0	-60.3	-10.9	0.5	
	SLE Rare +	-7492.5	0.0	0.0	-20.2	3.1	0.6	
	SLE Frequenti -	-8044.7	0.0	0.0	-40.4	-5.0	0.6	

Nodo	Comb.	N [kg]	Tx [kg]	Ty [kg]	Mx [kgm]	My [kgm]	σ_{ter} [kg/cm ²]	Rib.
	SLE Frequenti +	-7851.0	0.0	0.0	-32.4	-2.2	0.6	
	SLE Quasi Permanenti -	-7947.8	0.0	0.0	-36.4	-3.6	0.6	
	SLE Quasi Permanenti +	-7947.8	0.0	0.0	-36.4	-3.6	0.6	
	SLD -	-9015.7	0.0	0.0	-77.1	-96.5	0.5	
	SLD +	-6880.0	0.0	0.0	4.3	89.4	0.7	
	SLO -	-9158.6	0.0	0.0	-82.7	-109.7	0.5	
	SLO +	-6737.1	0.0	0.0	9.9	102.5	0.7	

VERIFICHE PLINTI

Verifiche plinti

Modalità di verifica



Il progetto e la verifica dei plinti in C.A. viene effettuato considerando come azioni agenti:

- Lo sforzo normale agente sul plinto.
- I momenti (come da figura) agenti sul plinto e dedotti dal calcolo.
- I momenti di trasporto $T h$ (dove T è il taglio ed h l'altezza del plinto)

Con tali sollecitazioni vengono calcolate le pressioni sul terreno (considerato come non reagente a trazione) e da queste calcolate le azioni di progetto per il dimensionamento delle armature.

Premesso che la verifica viene sempre condotta nella sezione del colletto a filo pilastro, indicando con α l'angolo compreso tra la base del plinto e la congiungente lo spigolo di detta base con l'attacco del pilastro, possono presentarsi i seguenti casi:

- L'angolo α è maggiore di trenta ($> 30'$) gradi nel qual caso il plinto è considerato tozzo. La forza di trazione F con la quale viene dimensionata l'armatura di base vale:

$$F = \frac{R \times (B - b)}{8 \times H_{Plinto}}$$

dove:

R
risultante delle pressioni del terreno
B
base del Plinto
b
larghezza minima del pilastro sovrastante
H_{plinto}
altezza totale del plinto

L'angolo α è minore di trenta ($< 30^\circ$) gradi nel qual caso il plinto è considerato snello ed il calcolo è svolto in maniera consueta considerando, per i plinti svasati, sezioni equivalenti di dimensioni:

$$s_1 = h_{zoc} - copr$$

$$s_2 = H_{pl} - (h_{zoc} + copr)$$

$$H_{eq} = s_1 + \frac{s_2 \cdot (2 \cdot b + b_1)}{3 \cdot b}$$

$$B_{eq} = \frac{2 \cdot b \cdot H_{eq}}{3 \cdot (s_1 + s_2)}$$

e per plinti cubici o a pozzetto:

$$d = H_{pl} - \text{copr}$$

$$s_1 = \frac{d}{3}$$

$$s_2 = \frac{2}{3} \cdot d$$

$$H_{eq} = s_1 + \frac{s_2 \cdot (2 \cdot b + b_1)}{3 \cdot b}$$

$$B_{eq} = \frac{2 \cdot b \cdot H_{eq}}{3 \cdot (s_1 + s_2)}$$

dove:

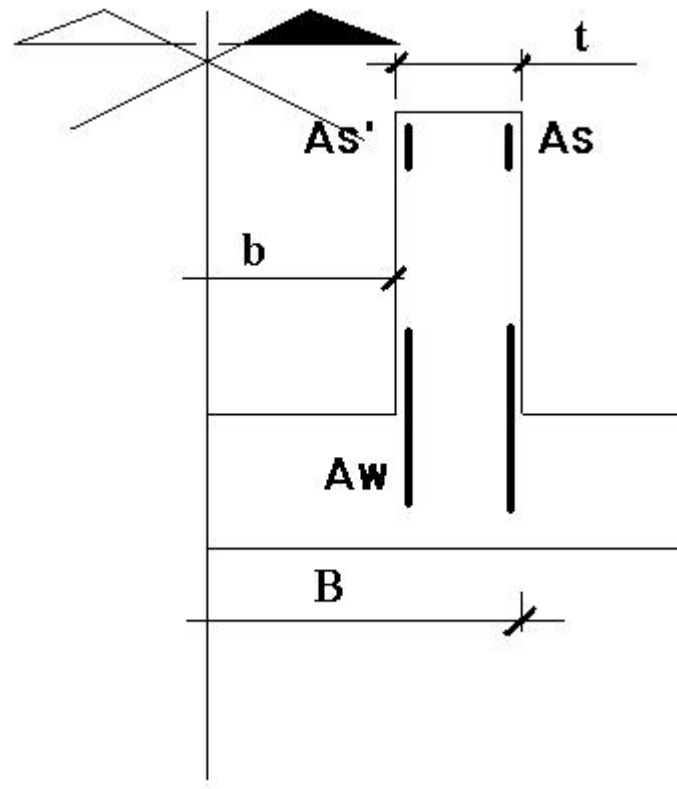
H_{pl}	
altezza del plinto	
copr	
spessore del copriferro	
b	
larghezza del plinto alla base	
b₁	
larghezza del plinto al colletto	

A favore di sicurezza si è in ogni caso considerata (ai fini delle verifiche) la pressione massima sul terreno come agente sull'intera sezione del plinto.

Verifica dei plinti a bicchiere

Spinta sulla parte superiore del pozzetto	
F₁ = V_{sd} + 3/2 M_{sd}/h	
Contro-Spinta sulla parte inferiore (opposta) del pozzetto	
F₂ = 3/2 M_{sd}/h	
Azione Verticale	
F₃ = N_{sd}	

Verifica bordi frontali



posto:

$$\alpha = A_s' / A_s$$

$$\alpha_c = E_s / E_c$$

$$d = t - \text{copriferro}$$

$$z = 0.9 d$$

$$c = (B + t) / 2 - b / 4 = B - 2 * (t + \text{copriferro})$$

$$\lambda = c / z$$

Verifica delle barre orizzontali (cerchiatura) del bordo superiore del pozzetto

$$F_1 < 2 A_s (1 + \alpha) f_{yd} / \lambda$$

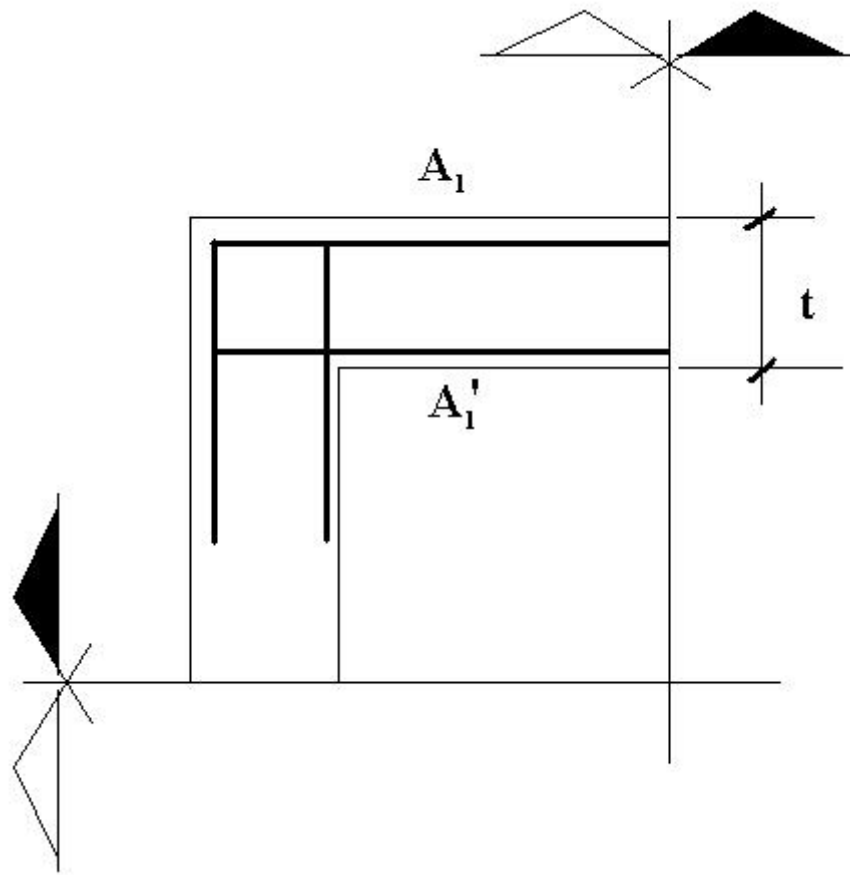
Verifica del calcestruzzo

$$F_1 < 2 * 0.4 * d (h/2) f_{cd} / (1 + \lambda^2)$$

Verifica alla base della biella compressa del telaio di cerchiatura del pozzetto

$$F_2 < (t (b + t) + \alpha_c A_w) f_{ctd}$$

Verifica bordi laterali

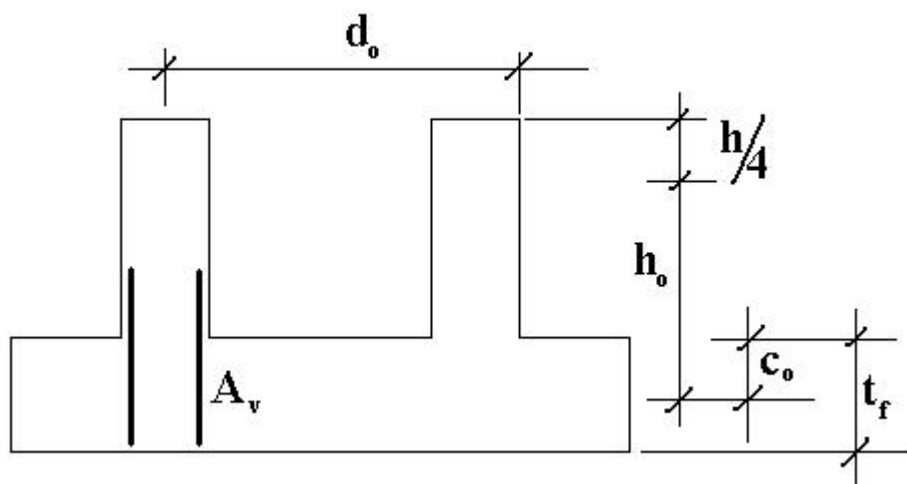


Verifica a 'tirante' delle armature di cerchiatura superiori del pozzetto

$$F_1 < 2 A_1 f_{yd} / (1 - \alpha_c / z)$$

$$F_1 < 2 A f_{yd} / (1 - \alpha_c / z)$$

Verifica pareti laterali del pozzetto



posto:

$$d_0 = B - t_f/2$$

$$c_0 = \min(0.2 d_0, t_f/2)$$

$$\lambda_0 = h_0 / d_0$$

Verifica delle barre verticali (tiranti) del pozzetto

$$F_1 < 2 A_v f_{yd} / \lambda_0$$

Verifica della biella compressa di calcestruzzo

$$F_1 < 2 * 0.4 * d_0 t f_{cd} / (1 + \lambda^2)$$

Sezioni Impiegate:

Sez. Num.	Info	Dimensioni	Criterio	Calcestruzzo	f_{ck} [kg/cm ²]	f_{cd} [kg/cm ²]
1	Plinto a bicchiere A	B 460 H 460 b 150 h 150 Hp 190 Hz 60 tb 35 [cm] Terreno numero 1	Verplin	C25/30	249.0	141.1
2	Plinto a bicchiere B	B 350 H 350 b 150 h 150 Hp 190 Hz 60 tb 35 [cm] Terreno numero 1	Verplin	C25/30	249.0	141.1
4	Plinto tozzo rompitratte	B 120 H 120 Hp 40 [cm] Terreno numero 1	Verplin	C25/30	249.0	141.1

Sez. Num.	σ_{RARE} [kg/cm ²]	σ_{FREQ} [kg/cm ²]	σ_{QP} [kg/cm ²]	Acciaio	f_{yk} [kg/cm ²]	f_{yd} [kg/cm ²]	σ_{yRARE} [kg/cm ²]	σ_{yFREQ} [kg/cm ²]	σ_{yQP} [kg/cm ²]	Copriferro [cm]
1	149.4	249.0	112.0	B 450 C	4500.0	3913.0	3600.0	4500.0	4500.0	3.50
2	149.4	249.0	112.0	B 450 C	4500.0	3913.0	3600.0	4500.0	4500.0	3.50
4	149.4	249.0	112.0	B 450 C	4500.0	3913.0	3600.0	4500.0	4500.0	3.50

Fattore di sovrarresistenza $\gamma_{R,d}$ (Nuovo) = **1.10** $\gamma_{R,d}$ (Esistente) = **0.00**

Fattore di sovrarresistenza Bicchieri $\gamma_{R,d}$ (Nuovo) = **1.20** $\gamma_{R,d}$ (Esistente) = **0.00**

Verifiche dei plinti a bicchiere

- Percentuale dell'armatura di parete utilizzata per la verifica del tirante nella parete ortogonale 50 %
- La resistenza della biella compressa in calcestruzzo di parete è valutata come $S_R = 0.4 d h f_{cd} / (1 + \lambda^2)^{1/2}$

Le azioni sulla parete del pozzetto sono valutate assumendo

- $\alpha_1 = 0.100000$
- $\alpha_2 = 0.800000$
- $\alpha_3 = 0.100000$
- coefficiente di attrito $\mu = 0.30$

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N_c [kg]	$M_{c,Base}$ [kgm]	$V_{c,Base}$ [kg]	σ_{Ter} [kg/cm ²]	Armature	B_{eq} [cm]	H_{eq} [cm]	M_d [kgm]	M_{Rd} [kgm]	N_d [kg]	N_{Rsd} [kg]	V_{sd} [kg/m]	V_{rd} [kg/m]
1	1	B 23	-142563.4	15501.5	-9820.8	1.2	23φ18	260.74	48.04	66190.5	91030.8			187.5	350.9
		H 23	-142563.4	-69524.0	-3328.2	1.2	23φ18	260.74	48.04	66190.5	91030.8			187.5	350.9

Verifiche Bicchiere nodo 1:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	A _{f_c}	A _{f_v}	Bordi Frontali			Pareti Laterali	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cls,r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cls,V} [kg]
B	13	85603.6	66277.1	8479.4	62240.9	28080.5	85603.6	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	18	75282.1	48646.2	6714.7	46068.3	16769.0	75282.1	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
2	1	B 25	-171477.9	85753.1	2459.9	1.5	23φ18	260.74	48.04	80463.5	91030.8			239.1	350.9
		H 25	-171477.9	19007.9	-10830.9	1.5	23φ18	260.74	48.04	80463.5	91030.8			239.1	350.9

Verifiche Bicchiere nodo 2:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cls.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cls.v} [kg]
B	13	117354.5	51975.9	10087.1	51866.8	6573.2	117354.5	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	25	117914.0	75739.9	12997.0	74345.2	25974.0	117914.0	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
3	1	B 27	-171654.0	88904.8	-2533.6	1.5	23φ18	260.74	48.04	81275.8	91030.8			241.9	350.9
		H 27	-171654.0	-18105.6	-10982.9	1.5	23φ18	260.74	48.04	81275.8	91030.8			241.9	350.9

Verifiche Bicchiere nodo 3:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cls.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cls.v} [kg]
B	22	103023.9	50909.0	10188.8	51238.3	10142.3	103023.9	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	27	118025.4	79140.6	13179.5	77320.1	28732.9	118025.4	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
4	1	B 25	-171654.1	88904.8	2533.4	1.5	23φ18	260.74	48.04	81275.8	91030.8			241.9	350.9
		H 25	-171654.1	18105.6	-10982.9	1.5	23φ18	260.74	48.04	81275.8	91030.8			241.9	350.9

Verifiche Bicchiere nodo 4:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cls.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cls.v} [kg]
B	14	103024.3	50908.8	10188.5	51237.8	10142.0	103024.3	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	25	118025.5	79140.6	13179.5	77320.1	28732.9	118025.5	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
5	1	B 27	-171477.9	85753.0	-2460.0	1.5	23φ18	260.74	48.04	80463.5	91030.8			239.1	350.9
		H 27	-171477.9	-19007.7	-10830.9	1.5	23φ18	260.74	48.04	80463.5	91030.8			239.1	350.9

Verifiche Bicchiere nodo 5:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cls,r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cls,rV} [kg]
B	21	117354.6	51976.1	10087.5	51867.3	6573.4	117354.6	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	27	117914.0	75739.8	12997.0	74345.2	25973.9	117914.0	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
6	1	B 15	-142565.8	15498.7	9821.0	1.2	23φ18	260.74	48.04	66190.2	91030.8			187.5	350.9
		H 15	-142565.8	69524.1	-3329.3	1.2	23φ18	260.74	48.04	66190.2	91030.8			187.5	350.9

Verifiche Bicchiere nodo 6:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cls,r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cls,rV} [kg]
B	21	85606.1	66276.7	8479.3	62240.4	28079.3	85606.1	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	20	75282.7	48643.2	6715.3	46066.4	16766.3	75282.7	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
7	2	B 15	-83393.4	10528.2	5119.0	1.4	17φ16	Tozzo				49780.0	123275.5	72.5	350.9
		H 15	-83393.4	42424.4	-1879.5	1.4	17φ16	Tozzo				49780.0	123275.5	72.5	350.9

Verifiche Bicchiere nodo 7:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cls,r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cls,rV} [kg]
B	14	41786.5	38082.5	6155.8	37161.8	18470.1	41786.5	5φ16	4φ16	102296.7	122775.4	41335.6	100882.3	382213.6
H	28	47440.7	21264.6	7456.4	24664.2	2975.6	47440.7	5φ16	4φ16	102296.7	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq} [cm]	H _{eq} [cm]	M _d [kgm]	M _{rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
8	2	B 23	-83394.6	10528.1	-5118.7	1.4	17φ16	Tozzo				49785.0	123275.5	72.5	350.9
		H 23	-83394.6	-42433.6	-1878.0	1.4	17φ16	Tozzo				49785.0	123275.5	72.5	350.9

Verifiche Bicchiere nodo 8:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cl.s.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cl.s.rv} [kg]
B	22	41786.9	38073.6	6157.9	37156.7	18462.7	41786.9	5φ16	4φ16	102296.7	122775.4	41335.6	100882.3	382213.6
H	26	47440.4	21264.1	7456.7	24664.1	2975.3	47440.4	5φ16	4φ16	102296.7	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq} [cm]	H _{eq} [cm]	M _d [kgm]	M _{rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
9	2	B 13	-83393.8	-10528.5	5119.4	1.4	17φ16	Tozzo				49781.4	123275.5	72.5	350.9
		H 13	-83393.8	42426.5	1878.4	1.4	17φ16	Tozzo				49781.4	123275.5	72.5	350.9

Verifiche Bicchiere nodo 9:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cl.s.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cl.s.rv} [kg]
B	16	41786.7	38082.8	6156.4	37162.7	18470.3	41786.7	5φ16	4φ16	102296.7	122775.4	41335.6	100882.3	382213.6
H	20	47440.7	21264.3	7456.6	24664.2	2975.4	47440.7	5φ16	4φ16	102296.7	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq} [cm]	H _{eq} [cm]	M _d [kgm]	M _{rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
10	2	B 21	-83392.8	-10528.5	-5119.3	1.4	17φ16	Tozzo				49785.3	123275.5	72.5	350.9
		H 21	-83392.8	-42435.0	1879.7	1.4	17φ16	Tozzo				49785.3	123275.5	72.5	350.9

Verifiche Bicchiere nodo 10:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cl.s.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cl.s.rv} [kg]
B	24	41785.2	38075.2	6158.4	37158.5	18464.5	41785.2	5φ16	4φ16	102296.7	122775.4	41335.6	100882.3	382213.6
H	18	47441.0	21264.9	7456.2	24664.3	2975.8	47441.0	5φ16	4φ16	102296.7	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
11	1	B 21	-142576.9	-15499.2	-9866.9	1.2	23φ18	260.74	48.04	66343.4	91030.8			187.5	350.9
		H 21	-142576.9	-69964.8	3329.0	1.2	23φ18	260.74	48.04	66343.4	91030.8			187.5	350.9

Verifiche Bicchiere nodo 11:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral		
											F1 _{Afr}	F1 _{Cl.s.r}	F2 _{Vr}	F1 _{Afv}	F1 _{Cl.s.r/V}
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]				[kg]	[kg]	[kg]	[kg]	[kg]
B	15	85581.3	66710.6	8535.5	62654.3	28444.5	85581.3	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6	
H	26	75280.7	48643.1	6715.1	46066.2	16766.9	75280.7	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6	

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
12	1	B 17	-171736.8	-85760.1	2470.6	1.5	23φ18	260.74	48.04	80576.6	91030.8			239.5	350.9
		H 17	-171736.8	19134.3	10829.2	1.5	23φ18	260.74	48.04	80576.6	91030.8			239.5	350.9

Verifiche Bicchiere nodo 12:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cl.s.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cl.s.rV} [kg]
B	15	117601.4	52339.7	10128.2	52204.9	6796.3	117601.4	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	17	118152.1	75752.5	12995.1	74351.2	25910.5	118152.1	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
13	1	B 19	-172125.8	-88620.3	-2391.0	1.5	23φ18	260.74	48.04	81234.7	91030.8			241.8	350.9
		H 19	-172125.8	-17908.0	10796.5	1.5	23φ18	260.74	48.04	81234.7	91030.8			241.8	350.9

Verifiche Bicchiere nodo 13:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cl_s.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cl_s.rV} [kg]
B	24	103383.6	51291.9	9616.2	50957.1	10325.9	103383.6	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	17	118635.3	79271.8	12955.5	77190.3	28644.1	118635.3	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
14	1	B 17	-172125.4	-88620.3	2390.9	1.5	23φ18	260.74	48.04	81234.6	91030.8			241.8	350.9
		H 17	-172125.4	17908.1	10796.5	1.5	23φ18	260.74	48.04	81234.6	91030.8			241.8	350.9

Verifiche Bicchiere nodo 14:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cl.s.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cl.s.rV} [kg]
B	16	103382.1	51291.9	9616.4	50957.3	10326.3	103382.1	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	19	118634.8	79271.8	12955.8	77190.5	28644.3	118634.8	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
15	1	B 19	-171736.4	-85760.1	-2470.6	1.5	23φ18	260.74	48.04	80576.4	91030.8			239.5	350.9
		H 19	-171736.4	-19134.1	10829.2	1.5	23φ18	260.74	48.04	80576.4	91030.8			239.5	350.9

Verifiche Bicchiere nodo 15:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cl_s.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cl_s.rV} [kg]
B	23	117600.0	52339.9	10128.5	52205.4	6796.9	117600.0	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	19	118151.7	75752.5	12995.0	74351.2	25910.6	118151.7	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
16	1	B 13	-142579.5	-15502.1	9867.2	1.2	23φ18	260.74	48.04	66345.1	91030.8			187.5	350.9
		H 13	-142579.5	69964.9	3327.7	1.2	23φ18	260.74	48.04	66345.1	91030.8			187.5	350.9

Verifiche Bicchiere nodo 16:

Direzione	Comb.	N _d	M _d	V _d	F1	F2	F3	Af _c	Af _v	Bordi Frontali			Pareti Lateral	
		[kg]	[kgm]	[kg]	[kg]	[kg]	[kg]			F1 _{Afr} [kg]	F1 _{Cl.s.r} [kg]	F2 _{Vr} [kg]	F1 _{Afv} [kg]	F1 _{Cl.s.rV} [kg]
B	23	85583.5	66710.2	8535.3	62653.8	28443.5	85583.5	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6
H	28	75281.5	48645.9	6714.5	46067.9	16768.9	75281.5	6φ16	4φ16	122756.1	122775.4	41335.6	100882.3	382213.6

Verifiche Plinti:

Nodo	Sez.	Comb. Critica	N _c [kg]	M _{c,Base} [kgm]	V _{c,Base} [kg]	σ _{Ter} [kg/cm ²]	Armature	B _{eq.} [cm]	H _{eq.} [cm]	M _d [kgm]	M _{Rd} [kgm]	N _d [kg]	N _{Rsd} [kg]	V _{sd} [kg/m]	V _{rd} [kg/m]
17	4	B 2	-11098.0	83.0	0.0	0.8	6φ14	Tozzo				4326.8	44267.4	0.0	270.5
		H 2	-11098.0	5.1	0.0	0.8	6φ14	Tozzo				4326.8	44267.4	0.0	270.5
18	4	B 2	-11110.7	83.7	0.0	0.8	6φ14	Tozzo				4324.0	44267.4	0.0	270.5
		H 2	-11110.7	-0.2	0.0	0.8	6φ14	Tozzo				4324.0	44267.4	0.0	270.5
19	4	B 2	-11110.7	83.7	0.0	0.8	6φ14	Tozzo				4324.0	44267.4	0.0	270.5
		H 2	-11110.7	0.2	0.0	0.8	6φ14	Tozzo				4324.0	44267.4	0.0	270.5
20	4	B 2	-11098.0	83.0	0.0	0.8	6φ14	Tozzo				4326.8	44267.4	0.0	270.5
		H 2	-11098.0	-5.1	0.0	0.8	6φ14	Tozzo				4326.8	44267.4	0.0	270.5
21	4	B 4	-11101.7	-83.2	0.0	0.8	6φ14	Tozzo				4328.6	44267.4	0.0	270.5
		H 4	-11101.7	5.1	0.0	0.8	6φ14	Tozzo				4328.6	44267.4	0.0	270.5
22	4	B 4	-11118.2	-84.2	0.0	0.8	6φ14	Tozzo				4327.5	44267.4	0.0	270.5
		H 4	-11118.2	-0.2	0.0	0.8	6φ14	Tozzo				4327.5	44267.4	0.0	270.5
23	4	B 4	-11118.2	-84.2	0.0	0.8	6φ14	Tozzo				4327.5	44267.4	0.0	270.5
		H 4	-11118.2	0.2	0.0	0.8	6φ14	Tozzo				4327.5	44267.4	0.0	270.5
24	4	B 4	-11101.7	-83.2	0.0	0.8	6φ14	Tozzo				4328.6	44267.4	0.0	270.5
		H 4	-11101.7	-5.1	0.0	0.8	6φ14	Tozzo				4328.6	44267.4	0.0	270.5

VERIFICA TRAVI DI COLLEGAMENTO

Verifiche travi

Modalità di verifica

Le travi vengono progettate-verificate a flessione retta e taglio nel piano longitudinale della trave sulla base dell'involuppo delle sollecitazioni.

Viene comunque sempre predisposta l'armatura minima mentre gli sforzi di taglio vengono integralmente assorbiti dalle staffe.

Le operazioni di progetto-verifica vengono condotte, per ogni asta, in tre diverse sezioni e precisamente in corrispondenza dei fili esterni dei pilastri e della sezione in campata nella quale viene riscontrato il massimo momento positivo (negativo).

I momenti si intendono positivi se tendono le fibre di intradosso (inferiori).

Per quanto concerne il progetto e la verifica delle travi a taglio esse vengono condotte nel modo seguente:

- Si controlla se la trave necessita o meno di armatura aggiuntiva a taglio:
 1. Se non occorre armatura aggiuntiva a taglio si procede a disporre la staffatura minima di regolamento e la progettazione ha termine.
 2. Se occorre armatura aggiuntiva a taglio la staffatura viene progettata andando a suddividere la trave, a seconda del caso, in uno, tre o cinque conci:
 - due tronchi in prossimità degli appoggi di lunghezza pari all'altezza della sezione;
 - due altri (eventuali) tronchi dall'ascissa precedente a quella in cui il taglio può essere assorbito con la sola staffatura minima da regolamento
 - un restante (eventuale) concio di chiusura centrale.
- In ogni caso l'armatura a taglio si intende simmetrica rispetto alla mezzzeria della trave e viene progettata considerando, rispetto alla mezzzeria, la zona della trave più sollecitata.

Per quanto concerne le verifiche a taglio esse vengono condotte suddividendo la trave in cinque conci:

due tronchi in prossimità degli appoggi di lunghezza pari all'altezza della sezione; due altri (eventuali) tronchi dall'ascissa precedente a quella in cui il taglio può essere assorbito con la sola staffatura minima da regolamento; il restante (eventuale) concio di chiusura centrale.

L'armatura a taglio si intende simmetrica rispetto alla mezzzeria della trave e viene progettata considerando, rispetto alla mezzzeria, la zona della trave più sollecitata.

Simbologia utilizzata:

Af Es.
Area di ferro all'estradosso
Af In.
Area di ferro all'intradosso
Sigb.Es.
Tensione del calcestruzzo estradosso
Sigb. In.
Tensione del calcestruzzo intradosso
Sigf. Es.
Tensione dell'acciaio estradosso
Sigf. In.
Tensione dell'acciaio intradosso

Sezioni Impiegate: Trave

Sezioni Nuove

Sez. Num.	Info	Dimensioni	Criterio	Calcestruzzo	γ_m	F.C.	f_{ck} [kg/cm ²]	f_{cd} [kg/cm ²]
4	Rett. di collegamento	B 40 H 70 [cm]	Vertrav	C25/30	1.50	1.00	249.0	141.1

Sez. Num.	σ_{RARE} [kg/cm ²]	σ_{FREQ} [kg/cm ²]	σ_{QP} [kg/cm ²]	Acciaio	γ_M	F.C.	f_{yk} [kg/cm ²]	f_{yd} [kg/cm ²]	σ_{yRARE} [kg/cm ²]	σ_{yFREQ} [kg/cm ²]	σ_{yQP} [kg/cm ²]	Cop. Es [cm]	Cop. In [cm]	cotg θ_i	cotg θ
1	149.4	249.0	112.0	B 450 C	1.15	1.00	4500.0	3913.0	3600.0	4500.0	4500.0	3.50	3.50	1.00	1.00
2	149.4	249.0	112.0	B 450 C	1.15	1.00	4500.0	3913.0	3600.0	4500.0	4500.0	3.50	3.50	1.00	1.00
4	149.4	249.0	112.0	B 450 C	1.15	1.00	4500.0	3913.0	3600.0	4500.0	4500.0	3.50	3.50	1.00	1.00

Impostazioni di verifica delle sezioni Trave

Sezione	Info	Ausiliaria	Esistente	Secondaria	Campo Elastico	Minimi Cap. 7
---------	------	------------	-----------	------------	----------------	---------------

1	a L di copertura B 60 H 120 b 30 h 30 [cm]					x
2	Rett. COPERTURA B 60 H 70 [cm]					x
3	Rett. di chiusura B 30 H 30 [cm]	x				x
4	Rett. di collegamento B 40 H 70 [cm]					x

Verifica a fessurazione diretta (calcolo ampiezza delle fessure)

Elemento	Comb. Rare mm	Comb. Frequenti mm	Comb. Quasi Permanenti mm
Trave	No	0.400	0.300
Trave di Fondazione	No	0.400	0.300

Fattore di sovrarresistenza Travi $\gamma_{R,d}$ (Nuovo) = 1.10 $\gamma_{R,d}$ (Esistente) = 0.00

Fattore di sovrarresistenza delle azioni sulle Fondazioni $\gamma_{R,d}$ (Nuovo) = 1.10 $\gamma_{R,d}$ (Esistente) = 0.00

Verifiche Travate :

Travata: Travata 1 Nodi 1 2 3 4 5 6

Nodo	x [m]	A_{fe} [cm ²]	A_{fi} [cm ²]	q_T [kg/m]	M_{rif} [kgm]	M_{de} [kgm]	M_{re} [kgm]	x/d	M_{di} [kgm]	M_{ri} [kgm]	x/d	σ_{be} [kg/cm ²]	σ_{bi} [kg/cm ²]	σ_{fe} [kg/cm ²]	σ_{fi} [kg/cm ²]	w mm
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
1	0.30	8.92	9.24			18431.0	21552.4	0.09	-7480.4	-22281.7	0.09					
					SLE Rare	6819.9			0.0			0.0	27.9	1240.5	281.2	
					SLE Freq.	5782.8			0.0			0.0	23.6	1051.9	238.4	0.0208
					SLE Q.P.	5550.0			0.0			0.0	22.7	1009.6	228.8	0.0200
Camp.	4.69	9.24	9.24	910.0	5004.1	0.0	22281.5	0.09	-5004.1	-22281.5	0.09					
					SLE Rare	0.0			-3849.3			15.5	0.0	157.9	701.0	
					SLE Freq.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
					SLE Q.P.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
2	9.08	9.24	9.24			15261.4	22281.5	0.09	-8657.6	-22281.5	0.09					
					SLE Rare	4032.3			0.0			0.0	16.3	734.3	165.4	
					SLE Freq.	3478.0			0.0			0.0	14.0	633.3	142.7	0.0127
					SLE Q.P.	3312.7			0.0			0.0	13.4	603.2	135.9	0.0121
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
2	0.30	9.24	9.24			15387.2	22281.5	0.09	-6858.0	-22281.5	0.09					
					SLE Rare	4888.4			0.0			0.0	19.7	890.2	200.5	
					SLE Freq.	4455.6			0.0			0.0	18.0	811.4	182.8	0.0162
					SLE Q.P.	4343.8			0.0			0.0	17.5	791.0	178.2	0.0158
Camp.	4.69	9.24	9.24	910.0	5004.1	0.0	22281.5	0.09	-5004.1	-22281.5	0.09					
					SLE Rare	0.0			-3849.3			15.5	0.0	157.9	701.0	
					SLE Freq.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
					SLE Q.P.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
3	9.08	9.24	9.24			15622.5	22281.5	0.09	-6661.4	-22281.5	0.09					
					SLE Rare	5151.6			0.0			0.0	20.8	938.1	211.3	
					SLE Freq.	4683.1			0.0			0.0	18.9	852.8	192.1	0.0171
					SLE Q.P.	4567.3			0.0			0.0	18.4	831.7	187.3	0.0166

Trave Sez. 4 Rett. 40x70 [cm] di collegamento														
3	0.30	9.24	9.24			15563.1	22281.5	0.09	-6708.7	-22281.5	0.09			
				SLE Rare		5102.6			0.0			0.0	20.6	929.2
				SLE Freq.		4628.9			0.0			0.0	18.7	842.9
				SLE Q.P.		4510.6			0.0			0.0	18.2	821.4
Camp.	4.69	9.24	9.24	910.0	5004.1	0.0	22281.5	0.09	-5004.1	-22281.5	0.09			
				SLE Rare		0.0			-3849.3			15.5	0.0	157.9
				SLE Freq.		0.0			-3849.3			15.5	0.0	157.9
				SLE Q.P.		0.0			-3849.3			15.5	0.0	157.9
4	9.08	9.24	9.24			15563.2	22281.5	0.09	-6708.8	-22281.5	0.09			
				SLE Rare		5102.6			0.0			0.0	20.6	929.2
				SLE Freq.		4628.9			0.0			0.0	18.7	842.9
				SLE Q.P.		4510.6			0.0			0.0	18.2	821.4
Trave Sez. 4 Rett. 40x70 [cm] di collegamento														
4	0.30	9.24	9.24			15624.0	22281.5	0.09	-6663.7	-22281.5	0.09			
				SLE Rare		5151.6			0.0			0.0	20.8	938.1
				SLE Freq.		4683.1			0.0			0.0	18.9	852.8
				SLE Q.P.		4567.3			0.0			0.0	18.4	831.7
Camp.	4.69	9.24	9.24	910.0	5004.1	0.0	22281.5	0.09	-5004.1	-22281.5	0.09			
				SLE Rare		0.0			-3849.3			15.5	0.0	157.9
				SLE Freq.		0.0			-3849.3			15.5	0.0	157.9
				SLE Q.P.		0.0			-3849.3			15.5	0.0	157.9
5	9.08	9.24	9.24			15385.7	22281.5	0.09	-6857.4	-22281.5	0.09			
				SLE Rare		4888.4			0.0			0.0	19.7	890.2
				SLE Freq.		4455.6			0.0			0.0	18.0	811.4
				SLE Q.P.		4343.8			0.0			0.0	17.5	791.0
Trave Sez. 4 Rett. 40x70 [cm] di collegamento														
5	0.30	9.24	9.24			15263.4	22281.5	0.09	-8659.6	-22281.5	0.09			
				SLE Rare		4032.3			0.0			0.0	16.3	734.3
				SLE Freq.		3478.0			0.0			0.0	14.0	633.3
				SLE Q.P.		3312.7			0.0			0.0	13.4	603.2
Camp.	4.69	9.24	9.24	910.0	5004.1	0.0	22281.5	0.09	-5004.1	-22281.5	0.09			
				SLE Rare		0.0			-3849.3			15.5	0.0	157.9
				SLE Freq.		0.0			-3849.3			15.5	0.0	157.9
				SLE Q.P.		0.0			-3849.3			15.5	0.0	157.9
6	9.08	8.92	9.24			18429.1	21552.4	0.09	-7478.4	-22281.7	0.09			
				SLE Rare		6819.9			0.0			0.0	27.9	1240.5
				SLE Freq.		5782.8			0.0			0.0	23.6	1051.9
				SLE Q.P.		5550.0			0.0			0.0	22.7	1009.6

Da [m] A [m] Dx [m] cotg(θ) V_{Ed} [kg] V_{Rd,c} [kg] V_{Rcd} [kg] V_{Rd} [kg] T_{Ed} [kgm] T_{Rcd} [kgm] T_{Rsd} [kgm] Staffe

Trave 1 2 Sez. 4 Rett. 40x70 [cm] di collegamento													
0.40	1.08	0.68	1.00	8634.7	10039.3	82670.5	36012.5	1239.4	13294.2	9600.8	Ø 10 2br.	10.0'	
1.08	8.30	7.22	1.00	8224.9	10039.3	82670.5	24008.3	1239.4	13294.2	6400.5	Ø 10 2br.	15.0'	
8.30	8.98	0.68	1.00	8726.1	10039.3	82670.5	36012.5	1239.4	13294.2	9600.8	Ø 10 2br.	10.0'	
Trave 2 3 Sez. 4 Rett. 40x70 [cm] di collegamento													
0.40	1.08	0.68	1.00	8726.1	10039.3	82670.5	36012.5	238.9	13294.2	9600.8	Ø 10 2br.	10.0'	
1.08	8.30	7.22	1.00	8224.9	10039.3	82670.5	24008.3	238.9	13294.2	6400.5	Ø 10 2br.	15.0'	
8.30	8.98	0.68	1.00	8726.1	10039.3	82670.5	36012.5	238.9	13294.2	9600.8	Ø 10 2br.	10.0'	
Trave 3 4 Sez. 4 Rett. 40x70 [cm] di collegamento													
0.40	1.08	0.68	1.00	8726.1	10039.3	82670.5	36012.5	0.1	13294.2	9600.8	Ø 10 2br.	10.0'	
1.08	8.30	7.22	1.00	8224.9	10039.3	82670.5	24008.3	0.1	13294.2	6400.5	Ø 10 2br.	15.0'	
8.30	8.98	0.68	1.00	8726.1	10039.3	82670.5	36012.5	0.1	13294.2	9600.8	Ø 10 2br.	10.0'	
Trave 4 5 Sez. 4 Rett. 40x70 [cm] di collegamento													
0.40	1.08	0.68	1.00	8726.1	10039.3	82670.5	36012.5	238.9	13294.2	9600.8	Ø 10 2br.	10.0'	
1.08	8.30	7.22	1.00	8224.9	10039.3	82670.5	24008.3	238.9	13294.2	6400.5	Ø 10 2br.	15.0'	
8.30	8.98	0.68	1.00	8726.1	10039.3	82670.5	36012.5	238.9	13294.2	9600.8	Ø 10 2br.	10.0'	

Trave 5 6 Sez. 4 Rett. 40x70 [cm] di collegamento											
0.40	1.08	0.68	1.00	8726.1	10039.3	82670.5	36012.5	1239.4	13294.2	9600.8	ø 10 2br. 10.0'
1.08	8.30	7.22	1.00	8224.9	10039.3	82670.5	24008.3	1239.4	13294.2	6400.5	ø 10 2br. 15.0'
8.30	8.98	0.68	1.00	8634.7	10039.3	82670.5	36012.5	1239.4	13294.2	9600.8	ø 10 2br. 10.0'

Travata: Travata 10 Nodi 6 8 10 16

Nodo	x [m]	A _{te} [cm ²]	A _{fi} [cm ²]	q _T [kg/m]	M _{rit} [kgm]	M _{de} [kgm]	M _{re} [kgm]	x/d	M _{di} [kgm]	M _{ri} [kgm]	x/d	σ _{be} [kg/cm ²]	σ _{bi} [kg/cm ²]	σ _{fe} [kg/cm ²]	σ _{fi} [kg/cm ²]	w mm
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
6	0.30	8.92	9.24			15665.0	21552.4	0.09	-4396.5	-22281.7	0.09					
					SLE Rare	7074.1			0.0			0.0	28.9	1286.8	291.7	
					SLE Freq.	6116.8			0.0			0.0	25.0	1112.7	252.2	0.0220
					SLE Q.P.	5856.5			0.0			0.0	23.9	1065.3	241.5	0.0211
Camp.	5.25	9.24	9.24	910.0	6270.5	0.0	22281.5	0.09	-6270.5	-22281.5	0.09					
					SLE Rare	0.0			-4823.4			19.5	0.0	197.9	878.3	
					SLE Freq.	0.0			-4823.4			19.5	0.0	197.9	878.3	0.0780
					SLE Q.P.	0.0			-4823.4			19.5	0.0	197.9	878.3	0.0780
8	10.20	9.24	9.24			15409.4	22281.5	0.09	-6049.8	-22281.5	0.09					
					SLE Rare	6118.8			0.0			0.0	24.7	1114.2	251.0	
					SLE Freq.	5106.1			0.0			0.0	20.6	929.8	209.4	0.0186
					SLE Q.P.	4872.8			0.0			0.0	19.6	887.3	199.9	0.0177
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
8	0.30	9.24	9.24			19313.8	22281.5	0.09	-14368.4	-22281.5	0.09					
					SLE Rare	4084.3			0.0			0.0	16.5	743.8	167.5	
					SLE Freq.	2790.8			0.0			0.0	11.3	508.2	114.5	0.0102
					SLE Q.P.	2472.6			0.0			0.0	10.0	450.3	101.4	0.0090
Camp.	2.90	9.24	9.24	910.0	1913.3	1839.2	22281.5	0.09	-1937.5	-22281.5	0.09					
					SLE Rare	0.0			-1471.8			5.9	0.0	60.4	268.0	
					SLE Freq.	0.0			-1471.8			5.9	0.0	60.4	268.0	0.0238
					SLE Q.P.	0.0			-1471.8			5.9	0.0	60.4	268.0	0.0238
10	5.50	9.24	9.24			19314.7	22281.5	0.09	-14369.5	-22281.5	0.09					
					SLE Rare	4084.4			0.0			0.0	16.5	743.8	167.5	
					SLE Freq.	2790.9			0.0			0.0	11.3	508.2	114.5	0.0102
					SLE Q.P.	2472.7			0.0			0.0	10.0	450.3	101.4	0.0090
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
10	0.30	9.24	9.24			15412.1	22281.5	0.09	-6052.4	-22281.5	0.09					
					SLE Rare	6118.8			0.0			0.0	24.7	1114.2	251.0	
					SLE Freq.	5106.2			0.0			0.0	20.6	929.8	209.5	0.0186
					SLE Q.P.	4872.9			0.0			0.0	19.6	887.3	199.9	0.0177
Camp.	5.25	9.24	9.24	910.0	6270.5	0.0	22281.5	0.09	-6270.5	-22281.5	0.09					
					SLE Rare	0.0			-4823.4			19.5	0.0	197.9	878.3	
					SLE Freq.	0.0			-4823.4			19.5	0.0	197.9	878.3	0.0780
					SLE Q.P.	0.0			-4823.4			19.5	0.0	197.9	878.3	0.0780
16	10.20	8.92	9.24			15662.8	21552.4	0.09	-4394.4	-22281.7	0.09					
					SLE Rare	7074.1			0.0			0.0	28.9	1286.8	291.7	
					SLE Freq.	6116.8			0.0			0.0	25.0	1112.6	252.2	0.0220
					SLE Q.P.	5856.4			0.0			0.0	23.9	1065.3	241.5	0.0211

Da [m] A [m] Dx [m] cotg(θ) V_{Ed} [kg] V_{Rd,c} [kg] V_{Rd} [kg] T_{Ed} [kgm] T_{Rd} [kgm] T_{Rsd} [kgm] Staffe

Trave 6 8 Sez. 4 Rett. 40x70 [cm] di collegamento											
0.40	1.08	0.69	1.00	8405.4	10039.3	82670.5	36012.5	1547.9	13294.2	9600.8	ø 10 2br. 10.0'
1.08	9.42	8.33	1.00	7986.6	10039.3	82670.5	24008.3	1547.9	13294.2	6400.5	ø 10 2br. 15.0'
9.42	10.10	0.69	1.00	8486.5	10039.3	82670.5	36012.5	1547.9	13294.2	9600.8	ø 10 2br. 10.0'
Trave 8 10 Sez. 4 Rett. 40x70 [cm] di collegamento											

0.40	1.07	0.67	1.00	11316.8	10039.3	82670.5	36012.5	13.4	13294.2	9600.8	ø 10 2br. 10.0'
1.07	4.73	3.66	1.00	10807.9	10039.3	82670.5	24008.3	13.4	13294.2	6400.5	ø 10 2br. 15.0'
4.73	5.40	0.67	1.00	11316.8	10039.3	82670.5	36012.5	13.4	13294.2	9600.8	ø 10 2br. 10.0'
Trave 10 16 Sez. 4 Rett. 40x70 [cm] di collegamento											
0.40	1.08	0.69	1.00	8486.5	10039.3	82670.5	36012.5	1550.3	13294.2	9600.8	ø 10 2br. 10.0'
1.08	9.42	8.33	1.00	7986.6	10039.3	82670.5	24008.3	1550.3	13294.2	6400.5	ø 10 2br. 15.0'
9.42	10.10	0.69	1.00	8405.4	10039.3	82670.5	36012.5	1550.3	13294.2	9600.8	ø 10 2br. 10.0'

Travata: Travata 2 Nodi 11 12 13 14 15 16

Nodo	x [m]	A _{fe} [cm ²]	A _{fi} [cm ²]	q _T [kg/m]	M _{rif} [kgm]	M _{de} [kgm]	M _{re} [kgm]	x/d	M _{di} [kgm]	M _{ri} [kgm]	x/d	σ _{be} [kg/cm ²]	σ _{bi} [kg/cm ²]	σ _{fe} [kg/cm ²]	σ _{fi} [kg/cm ²]	w mm
------	----------	---------------------------------------	---------------------------------------	--------------------------	---------------------------	--------------------------	--------------------------	-----	--------------------------	--------------------------	-----	--	--	--	--	---------

Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
11	0.30	8.92	9.24			18525.8	21552.4	0.09	-7548.7	-22281.7	0.09					
					SLE Rare	6830.8			0.0			0.0	27.9	1242.5	281.6	
					SLE Freq.	5793.7			0.0			0.0	23.7	1053.9	238.9	0.0208
					SLE Q.P.	5560.9			0.0			0.0	22.7	1011.5	229.3	0.0200
Camp.	4.69	9.24	9.24	910.0	5004.1	0.0	22281.5	0.09	-5004.1	-22281.5	0.09					
					SLE Rare	0.0			-3849.3			15.5	0.0	157.9	701.0	
					SLE Freq.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
					SLE Q.P.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
12	9.08	9.24	9.24			15328.8	22281.5	0.09	-8741.4	-22281.5	0.09					
					SLE Rare	4022.3			0.0			0.0	16.2	732.4	165.0	
					SLE Freq.	3468.0			0.0			0.0	14.0	631.5	142.3	0.0126
					SLE Q.P.	3302.6			0.0			0.0	13.3	601.4	135.5	0.0120
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
12	0.30	9.24	9.24			15472.2	22281.5	0.09	-6918.3	-22281.5	0.09					
					SLE Rare	4898.5			0.0			0.0	19.8	892.0	200.9	
					SLE Freq.	4465.7			0.0			0.0	18.0	813.2	183.2	0.0163
					SLE Q.P.	4353.9			0.0			0.0	17.6	792.8	178.6	0.0159
Camp.	4.69	9.24	9.24	910.0	5004.1	0.0	22281.5	0.09	-5004.1	-22281.5	0.09					
					SLE Rare	0.0			-3849.3			15.5	0.0	157.9	701.0	
					SLE Freq.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
					SLE Q.P.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
13	9.08	9.24	9.24			15693.6	22281.5	0.09	-6748.5	-22281.5	0.09					
					SLE Rare	5140.6			0.0			0.0	20.7	936.1	210.9	
					SLE Freq.	4672.1			0.0			0.0	18.8	850.8	191.6	0.0170
					SLE Q.P.	4556.3			0.0			0.0	18.4	829.7	186.9	0.0166
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
13	0.30	9.24	9.24			15650.7	22281.5	0.09	-6792.4	-22281.5	0.09					
					SLE Rare	5101.7			0.0			0.0	20.6	929.0	209.3	
					SLE Freq.	4628.0			0.0			0.0	18.7	842.8	189.8	0.0169
					SLE Q.P.	4509.7			0.0			0.0	18.2	821.2	185.0	0.0164
Camp.	4.69	9.24	9.24	910.0	5004.1	0.0	22281.5	0.09	-5004.1	-22281.5	0.09					
					SLE Rare	0.0			-3849.3			15.5	0.0	157.9	701.0	
					SLE Freq.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
					SLE Q.P.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
14	9.08	9.24	9.24			15650.7	22281.5	0.09	-6792.3	-22281.5	0.09					
					SLE Rare	5101.7			0.0			0.0	20.6	929.0	209.3	
					SLE Freq.	4628.0			0.0			0.0	18.7	842.8	189.8	0.0169
					SLE Q.P.	4509.7			0.0			0.0	18.2	821.2	185.0	0.0164
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
14	0.30	9.24	9.24			15697.6	22281.5	0.09	-6753.4	-22281.5	0.09					
					SLE Rare	5140.6			0.0			0.0	20.7	936.1	210.9	
					SLE Freq.	4672.1			0.0			0.0	18.8	850.8	191.6	0.0170
					SLE Q.P.	4556.3			0.0			0.0	18.4	829.7	186.9	0.0166
Camp.	4.69	9.24	9.24	910.0	5004.1	0.0	22281.5	0.09	-5004.1	-22281.5	0.09					
					SLE Rare	0.0			-3849.3			15.5	0.0	157.9	701.0	

				SLE Freq.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
				SLE Q.P.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
15	9.08	9.24	9.24			15468.2	22281.5	0.09	-6915.1	-22281.5	0.09				
				SLE Rare	4898.5			0.0			0.0	19.8	892.0	200.9	
				SLE Freq.	4465.7			0.0			0.0	18.0	813.2	183.2	0.0163
				SLE Q.P.	4353.9			0.0			0.0	17.6	792.8	178.6	0.0159
Trave Sez. 4 Rett. 40x70 [cm] di collegamento															
15	0.30	9.24	9.24			15330.8	22281.5	0.09	-8743.4	-22281.5	0.09				
				SLE Rare	4022.3			0.0			0.0	16.2	732.4	165.0	
				SLE Freq.	3468.0			0.0			0.0	14.0	631.5	142.3	0.0126
				SLE Q.P.	3302.6			0.0			0.0	13.3	601.4	135.5	0.0120
Camp.	4.69	9.24	9.24	910.0	5004.1	0.0	22281.5	0.09	-5004.1	-22281.5	0.09				
				SLE Rare	0.0			-3849.3			15.5	0.0	157.9	701.0	
				SLE Freq.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
				SLE Q.P.	0.0			-3849.3			15.5	0.0	157.9	701.0	0.0622
16	9.08	8.92	9.24			18523.9	21552.4	0.09	-7546.8	-22281.7	0.09				
				SLE Rare	6830.8			0.0			0.0	27.9	1242.5	281.6	
				SLE Freq.	5793.7			0.0			0.0	23.7	1053.9	238.9	0.0208
				SLE Q.P.	5560.9			0.0			0.0	22.7	1011.5	229.3	0.0200

Da **A** **Dx** **cotg(θ)** **V_{Ed}** **V_{Rd,c}** **V_{Rcd}** **V_{Rd}** **T_{Ed}** **T_{Rcd}** **T_{Rsd}** **Staffe**
[m] **[m]** **[m]** **[kg]** **[kg]** **[kg]** **[kg]** **[kgm]** **[kgm]** **[kgm]**

Trave 11 12 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.40	1.08	0.68	1.00	8634.7	10039.3	82670.5	36012.5	1239.5	13294.2	9600.8	∅ 10 2br.	10.0'			
1.08	8.30	7.22	1.00	8224.9	10039.3	82670.5	24008.3	1239.5	13294.2	6400.5	∅ 10 2br.	15.0'			
8.30	8.98	0.68	1.00	8726.1	10039.3	82670.5	36012.5	1239.5	13294.2	9600.8	∅ 10 2br.	10.0'			
Trave 12 13 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.40	1.08	0.68	1.00	8726.1	10039.3	82670.5	36012.5	243.8	13294.2	9600.8	∅ 10 2br.	10.0'			
1.08	8.30	7.22	1.00	8224.9	10039.3	82670.5	24008.3	243.8	13294.2	6400.5	∅ 10 2br.	15.0'			
8.30	8.98	0.68	1.00	8726.1	10039.3	82670.5	36012.5	243.8	13294.2	9600.8	∅ 10 2br.	10.0'			
Trave 13 14 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.40	1.08	0.68	1.00	8726.1	10039.3	82670.5	36012.5	0.2	13294.2	9600.8	∅ 10 2br.	10.0'			
1.08	8.30	7.22	1.00	8224.9	10039.3	82670.5	24008.3	0.2	13294.2	6400.5	∅ 10 2br.	15.0'			
8.30	8.98	0.68	1.00	8726.1	10039.3	82670.5	36012.5	0.2	13294.2	9600.8	∅ 10 2br.	10.0'			
Trave 14 15 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.40	1.08	0.68	1.00	8726.1	10039.3	82670.5	36012.5	243.8	13294.2	9600.8	∅ 10 2br.	10.0'			
1.08	8.30	7.22	1.00	8224.9	10039.3	82670.5	24008.3	243.8	13294.2	6400.5	∅ 10 2br.	15.0'			
8.30	8.98	0.68	1.00	8726.1	10039.3	82670.5	36012.5	243.8	13294.2	9600.8	∅ 10 2br.	10.0'			
Trave 15 16 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.40	1.08	0.68	1.00	8726.1	10039.3	82670.5	36012.5	1239.6	13294.2	9600.8	∅ 10 2br.	10.0'			
1.08	8.30	7.22	1.00	8224.9	10039.3	82670.5	24008.3	1239.6	13294.2	6400.5	∅ 10 2br.	15.0'			
8.30	8.98	0.68	1.00	8634.7	10039.3	82670.5	36012.5	1239.6	13294.2	9600.8	∅ 10 2br.	10.0'			

Travata: Travata 5 Nodi 1 7 9 11

Nodo **x** **A_{fe}** **A_{fi}** **q_T** **M_{if}** **M_{de}** **M_{re}** **x/d** **M_{di}** **M_{ri}** **x/d** **σ_{be}** **σ_{bi}** **σ_{fe}** **σ_{fi}** **w**
[m] **[cm²]** **[cm²]** **[kg/m]** **[kgm]** **[kgm]** **[kgm]** **[kgm]** **[kgm]** **[kgm]** **[kgm]** **[kgm]** **[kg/cm²]** **[kg/cm²]** **[kg/cm²]** **[kg/cm²]** **mm**

Trave Sez. 4 Rett. 40x70 [cm] di collegamento															
1	0.30	8.92	9.24			15665.0	21552.4	0.09	-4396.5	-22281.7	0.09				
				SLE Rare	7074.1			0.0			0.0	28.9	1286.8	291.7	
				SLE Freq.	6116.8			0.0			0.0	25.0	1112.7	252.2	0.0220
				SLE Q.P.	5856.5			0.0			0.0	23.9	1065.3	241.5	0.0211
Camp.	5.25	9.24	9.24	910.0	6270.5	0.0	22281.5	0.09	-6270.5	-22281.5	0.09				
				SLE Rare	0.0			-4823.4			19.5	0.0	197.9	878.3	
				SLE Freq.	0.0			-4823.4			19.5	0.0	197.9	878.3	0.0780
				SLE Q.P.	0.0			-4823.4			19.5	0.0	197.9	878.3	0.0780

7	10.20	9.24	9.24			15409.5	22281.5	0.09	-6049.9	-22281.5	0.09								
					SLE Rare	6118.8			0.0			0.0	24.7	1114.2	251.0				
					SLE Freq.	5106.1			0.0			0.0	20.6	929.8	209.4	0.0186			
					SLE Q.P.	4872.8			0.0			0.0	19.6	887.3	199.9	0.0177			
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																			
7	0.30	9.24	9.24			19314.3	22281.5	0.09	-14369.3	-22281.5	0.09								
					SLE Rare	4084.3			0.0			0.0	16.5	743.8	167.5				
					SLE Freq.	2790.8			0.0			0.0	11.3	508.2	114.5	0.0102			
					SLE Q.P.	2472.6			0.0			0.0	10.0	450.3	101.4	0.0090			
Camp.	2.90	9.24	9.24	910.0	1913.3	1840.1	22281.5	0.09	-1938.8	-22281.5	0.09								
					SLE Rare	0.0			-1471.8			5.9	0.0	60.4	268.0				
					SLE Freq.	0.0			-1471.8			5.9	0.0	60.4	268.0	0.0238			
					SLE Q.P.	0.0			-1471.8			5.9	0.0	60.4	268.0	0.0238			
9	5.50	9.24	9.24			19316.0	22281.5	0.09	-14371.3	-22281.5	0.09								
					SLE Rare	4084.4			0.0			0.0	16.5	743.8	167.5				
					SLE Freq.	2790.9			0.0			0.0	11.3	508.2	114.5	0.0102			
					SLE Q.P.	2472.7			0.0			0.0	10.0	450.3	101.4	0.0090			
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																			
9	0.30	9.24	9.24			15412.0	22281.5	0.09	-6052.3	-22281.5	0.09								
					SLE Rare	6118.8			0.0			0.0	24.7	1114.2	251.0				
					SLE Freq.	5106.2			0.0			0.0	20.6	929.8	209.5	0.0186			
					SLE Q.P.	4872.9			0.0			0.0	19.6	887.3	199.9	0.0177			
Camp.	5.25	9.24	9.24	910.0	6270.5	0.0	22281.5	0.09	-6270.5	-22281.5	0.09								
					SLE Rare	0.0			-4823.4			19.5	0.0	197.9	878.3				
					SLE Freq.	0.0			-4823.4			19.5	0.0	197.9	878.3	0.0780			
					SLE Q.P.	0.0			-4823.4			19.5	0.0	197.9	878.3	0.0780			
11	10.20	8.92	9.24			15662.8	21552.4	0.09	-4394.3	-22281.7	0.09								
					SLE Rare	7074.1			0.0			0.0	28.9	1286.8	291.7				
					SLE Freq.	6116.8			0.0			0.0	25.0	1112.6	252.2	0.0220			
					SLE Q.P.	5856.4			0.0			0.0	23.9	1065.3	241.5	0.0211			

Da [m] **A** [m] **Dx** [m] **cotg(θ)** **V_{ed}** [kg] **V_{Rd,c}** [kg] **V_{Rcd}** [kg] **V_{Rd}** [kg] **T_{ed}** [kgm] **T_{Rcd}** [kgm] **T_{Rsd}** [kgm] **Staffe**

Trave 1 7 Sez. 4 Rett. 40x70 [cm] di collegamento												
0.40	1.08	0.69	1.00	8405.4	10039.3	82670.5	36012.5	1547.6	13294.2	9600.8	Ø 10 2br.	10.0'
1.08	9.42	8.33	1.00	7986.6	10039.3	82670.5	24008.3	1547.6	13294.2	6400.5	Ø 10 2br.	15.0'
9.42	10.10	0.69	1.00	8486.5	10039.3	82670.5	36012.5	1547.6	13294.2	9600.8	Ø 10 2br.	10.0'
Trave 7 9 Sez. 4 Rett. 40x70 [cm] di collegamento												
0.40	1.07	0.67	1.00	11316.8	10039.3	82670.5	36012.5	13.5	13294.2	9600.8	Ø 10 2br.	10.0'
1.07	4.73	3.66	1.00	10807.9	10039.3	82670.5	24008.3	13.5	13294.2	6400.5	Ø 10 2br.	15.0'
4.73	5.40	0.67	1.00	11316.8	10039.3	82670.5	36012.5	13.5	13294.2	9600.8	Ø 10 2br.	10.0'
Trave 9 11 Sez. 4 Rett. 40x70 [cm] di collegamento												
0.40	1.08	0.69	1.00	8486.5	10039.3	82670.5	36012.5	1550.0	13294.2	9600.8	Ø 10 2br.	10.0'
1.08	9.42	8.33	1.00	7986.6	10039.3	82670.5	24008.3	1550.0	13294.2	6400.5	Ø 10 2br.	15.0'
9.42	10.10	0.69	1.00	8405.4	10039.3	82670.5	36012.5	1550.0	13294.2	9600.8	Ø 10 2br.	10.0'

Travata: Travata 6 Nodi 2 17 21 12

Nodo **x** [m] **A_{fe}** [cm²] **A_{fi}** [cm²] **q_r** [kg/m] **M_{rif}** [kgm] **M_{de}** [kgm] **M_{re}** [kgm] **x/d** **M_{di}** [kgm] **M_{ri}** [kgm] **x/d** **σ_{be}** [kg/cm²] **σ_{bi}** [kg/cm²] **σ_{fe}** [kg/cm²] **σ_{fi}** [kg/cm²] **w** mm

Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
2	0.30	8.92	9.24			11355.3	21552.4	0.09	-6339.7	-22281.7	0.09					
					SLE Rare	5361.7			-335.2			1.4	21.9	975.3	221.1	
					SLE Freq.	3282.4			0.0			0.0	13.4	597.1	135.3	0.0118
					SLE Q.P.	2722.7			0.0			0.0	11.1	495.3	112.3	0.0098
Camp.	4.62	9.24	9.24	910.0	4538.9	1236.8	22281.5	0.09	-6454.9	-22281.5	0.09					

				SLE Rare	0.0			-4056.0			16.4	0.0	166.4	738.6	
				SLE Freq.	0.0			-3486.4			14.1	0.0	143.0	634.9	0.0564
				SLE Q.P.	0.0			-3486.4			14.1	0.0	143.0	634.9	0.0564
17	8.93	9.24	9.24			8063.1	22281.5	0.09	0.0	-22281.5	0.09				
				SLE Rare	6111.8			0.0			0.0	24.6	1112.9	250.7	
				SLE Freq.	5621.9			0.0			0.0	22.7	1023.7	230.6	0.0205
				SLE Q.P.	5522.5			0.0			0.0	22.3	1005.6	226.5	0.0201
Trave Sez. 4 Rett. 40x70 [cm] di collegamento															
17	0.00	9.24	9.24			7980.2	22281.5	0.09	0.0	-22281.5	0.09				
				SLE Rare	6051.6			0.0			0.0	24.4	1102.0	248.2	
				SLE Freq.	5581.6			0.0			0.0	22.5	1016.4	229.0	0.0203
				SLE Q.P.	5486.2			0.0			0.0	22.1	999.0	225.0	0.0200
Camp.	4.47	9.24	9.24	910.0	4538.9	0.0	22281.5	0.09	-4538.9	-22281.5	0.09				
				SLE Rare	0.0			-3491.4			14.1	0.0	143.2	635.8	
				SLE Freq.	0.0			-3491.4			14.1	0.0	143.2	635.8	0.0565
				SLE Q.P.	0.0			-3491.4			14.1	0.0	143.2	635.8	0.0565
21	8.93	9.24	9.24			7987.6	22281.5	0.09	0.0	-22281.5	0.09				
				SLE Rare	6057.3			0.0			0.0	24.4	1103.0	248.5	
				SLE Freq.	5587.3			0.0			0.0	22.5	1017.4	229.2	0.0204
				SLE Q.P.	5491.9			0.0			0.0	22.1	1000.1	225.3	0.0200
Trave Sez. 4 Rett. 40x70 [cm] di collegamento															
21	0.00	9.24	9.24			8070.8	22281.5	0.09	0.0	-22281.5	0.09				
				SLE Rare	6117.6			0.0			0.0	24.7	1114.0	250.9	
				SLE Freq.	5627.7			0.0			0.0	22.7	1024.8	230.8	0.0205
				SLE Q.P.	5528.3			0.0			0.0	22.3	1006.7	226.8	0.0201
Camp.	4.32	9.24	9.24	910.0	4538.9	1171.0	22281.5	0.09	-6392.5	-22281.5	0.09				
				SLE Rare	0.0			-4057.1			16.4	0.0	166.4	738.8	
				SLE Freq.	0.0			-3486.4			14.1	0.0	143.0	634.9	0.0564
				SLE Q.P.	0.0			-3486.4			14.1	0.0	143.0	634.9	0.0564
12	8.63	8.92	9.24			11283.0	21552.4	0.09	-6283.5	-22281.7	0.09				
				SLE Rare	5353.4			-340.3			1.4	21.9	973.8	220.7	
				SLE Freq.	3274.1			0.0			0.0	13.4	595.6	135.0	0.0118
				SLE Q.P.	2714.4			0.0			0.0	11.1	493.7	111.9	0.0098

Da [m] **A** [m] **Dx** [m] **cotg(θ)** **V_{ed}** [kg] **V_{Rd,c}** [kg] **V_{Rcd}** [kg] **V_{Rd}** [kg] **T_{ed}** [kgm] **T_{Rcd}** [kgm] **T_{Rsd}** [kgm] **Staffe**

Trave 2 17 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.40	1.09	0.69	1.00	8571.7	10039.3	82670.5	36012.5	146.9	13294.2	9600.8	∅ 10 2br.	10.0'			
1.09	8.24	7.15	1.00	8308.9	10039.3	82670.5	24008.3	146.9	13294.2	6400.5	∅ 10 2br.	15.0'			
8.24	8.93	0.69	1.00	8804.6	10039.3	82670.5	36012.5	146.9	13294.2	9600.8	∅ 10 2br.	10.0'			
Trave 17 21 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.00	0.70	0.70	1.00	8613.9	10039.3	82670.5	36012.5	12.7	13294.2	9600.8	∅ 10 2br.	10.0'			
0.70	8.23	7.53	1.00	8123.9	10039.3	82670.5	24008.3	12.7	13294.2	6400.5	∅ 10 2br.	15.0'			
8.23	8.93	0.70	1.00	8613.9	10039.3	82670.5	36012.5	12.7	13294.2	9600.8	∅ 10 2br.	10.0'			
Trave 21 12 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.00	0.69	0.69	1.00	8804.6	10039.3	82670.5	36012.5	150.6	13294.2	9600.8	∅ 10 2br.	10.0'			
0.69	7.84	7.15	1.00	8308.9	10039.3	82670.5	24008.3	150.6	13294.2	6400.5	∅ 10 2br.	15.0'			
7.84	8.53	0.69	1.00	8571.7	10039.3	82670.5	36012.5	150.6	13294.2	9600.8	∅ 10 2br.	10.0'			

Travata: Travata 7 Nodi 3 18 22 13

Nodo **x** [m] **A_{fe}** [cm²] **A_{fi}** [cm²] **q_T** [kg/m] **M_{rif}** [kgm] **M_{de}** [kgm] **M_{re}** [kgm] **x/d** **M_{di}** [kgm] **M_{ri}** [kgm] **x/d** **σ_{be}** [kg/cm²] **σ_{bi}** [kg/cm²] **σ_{fe}** [kg/cm²] **σ_{fi}** [kg/cm²] **w** mm

Trave Sez. 4 Rett. 40x70 [cm] di collegamento															
3	0.30	8.92	9.24			11740.0	21552.4	0.09	-6698.0	-22281.7	0.09				
				SLE Rare		5419.9			-365.0			1.5	22.1	985.9	223.5

				SLE Freq.	3298.8			0.0			0.0	13.5	600.1	136.0	0.0119
				SLE Q.P.	2728.4			0.0			0.0	11.1	496.3	112.5	0.0098
Camp.	4.62	9.24	9.24	910.0	4538.9	1415.0	22281.5	0.09	-6624.8	-22281.5	0.09				
				SLE Rare	0.0				-4072.2			16.4	0.0	167.0	741.5
				SLE Freq.	0.0				-3486.4			14.1	0.0	143.0	634.9
				SLE Q.P.	0.0				-3486.4			14.1	0.0	143.0	634.9
18	8.93	9.24	9.24			8081.0	22281.5	0.09	0.0	-22281.5	0.09				
				SLE Rare	6124.0				0.0			0.0	24.7	1115.2	251.2
				SLE Freq.	5626.1				0.0			0.0	22.7	1024.5	230.8
				SLE Q.P.	5524.8				0.0			0.0	22.3	1006.1	226.6
Trave Sez. 4 Rett. 40x70 [cm] di collegamento															
18	0.00	9.24	9.24			7997.3	22281.5	0.09	0.0	-22281.5	0.09				
				SLE Rare	6063.3				0.0			0.0	24.4	1104.1	248.7
				SLE Freq.	5585.6				0.0			0.0	22.5	1017.1	229.1
				SLE Q.P.	5488.4				0.0			0.0	22.1	999.4	225.1
Camp.	4.47	9.24	9.24	910.0	4538.9	0.0	22281.5	0.09	-4538.9	-22281.5	0.09				
				SLE Rare	0.0				-3491.4			14.1	0.0	143.2	635.8
				SLE Freq.	0.0				-3491.4			14.1	0.0	143.2	635.8
				SLE Q.P.	0.0				-3491.4			14.1	0.0	143.2	635.8
22	8.93	9.24	9.24			8012.0	22281.5	0.09	0.0	-22281.5	0.09				
				SLE Rare	6074.7				0.0			0.0	24.5	1106.2	249.2
				SLE Freq.	5596.9				0.0			0.0	22.6	1019.2	229.6
				SLE Q.P.	5499.7				0.0			0.0	22.2	1001.5	225.6
Trave Sez. 4 Rett. 40x70 [cm] di collegamento															
22	0.00	9.24	9.24			8096.2	22281.5	0.09	0.0	-22281.5	0.09				
				SLE Rare	6135.7				0.0			0.0	24.7	1117.3	251.7
				SLE Freq.	5637.7				0.0			0.0	22.7	1026.6	231.3
				SLE Q.P.	5536.4				0.0			0.0	22.3	1008.2	227.1
Camp.	4.32	9.24	9.24	910.0	4538.9	1381.9	22281.5	0.09	-6598.6	-22281.5	0.09				
				SLE Rare	0.0				-4074.4			16.4	0.0	167.1	742.0
				SLE Freq.	0.0				-3486.4			14.1	0.0	143.0	634.9
				SLE Q.P.	0.0				-3486.4			14.1	0.0	143.0	634.9
13	8.63	8.92	9.24			11697.7	21552.4	0.09	-6687.6	-22281.7	0.09				
				SLE Rare	5403.3				-375.2			1.5	22.1	982.9	222.8
				SLE Freq.	3282.2				0.0			0.0	13.4	597.0	135.3
				SLE Q.P.	2711.8				0.0			0.0	11.1	493.3	111.8

Da **A** **Dx** **cotg(θ)** **V_{Ed}** **V_{Rd,c}** **V_{Rcd}** **V_{Rd}** **T_{Ed}** **T_{Rcd}** **T_{Rsd}** **Staffe**
 [m] [m] [m] [kg] [kg] [kg] [kg] [kgm] [kgm] [kgm]

Trave 3 18 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.40	1.09	0.69	1.00	8571.7	10039.3	82670.5	36012.5	144.7	13294.2	9600.8	∅ 10 2br.	10.0'			
1.09	8.24	7.15	1.00	8308.9	10039.3	82670.5	24008.3	144.7	13294.2	6400.5	∅ 10 2br.	15.0'			
8.24	8.93	0.69	1.00	8804.6	10039.3	82670.5	36012.5	144.7	13294.2	9600.8	∅ 10 2br.	10.0'			
Trave 18 22 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.00	0.70	0.70	1.00	8613.9	10039.3	82670.5	36012.5	19.1	13294.2	9600.8	∅ 10 2br.	10.0'			
0.70	8.23	7.53	1.00	8123.9	10039.3	82670.5	24008.3	19.1	13294.2	6400.5	∅ 10 2br.	15.0'			
8.23	8.93	0.70	1.00	8613.9	10039.3	82670.5	36012.5	19.1	13294.2	9600.8	∅ 10 2br.	10.0'			
Trave 22 13 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.00	0.69	0.69	1.00	8804.6	10039.3	82670.5	36012.5	148.7	13294.2	9600.8	∅ 10 2br.	10.0'			
0.69	7.84	7.15	1.00	8308.9	10039.3	82670.5	24008.3	148.7	13294.2	6400.5	∅ 10 2br.	15.0'			
7.84	8.53	0.69	1.00	8571.7	10039.3	82670.5	36012.5	148.7	13294.2	9600.8	∅ 10 2br.	10.0'			

Travata: Travata 8 Nodi 4 19 23 14

Nodo	x	A _{fe}	A _{fi}	q _T	M _{rif}	M _{de}	M _{re}	x/d	M _{di}	M _{ri}	x/d	σ _{be}	σ _{bi}	σ _{fe}	σ _{fi}	w
	[m]	[cm ²]	[cm ²]	[kg/m]	[kgm]	[kgm]	[kgm]		[kgm]	[kgm]		[kg/cm ²]	[kg/cm ²]	[kg/cm ²]	[kg/cm ²]	mm

Trave Sez. 4 Rett. 40x70 [cm] di collegamento															
4	0.30	8.92	9.24			11740.0	21552.4	0.09	-6698.0	-22281.7	0.09				
					SLE Rare	5419.9			-365.0			1.5	22.1	985.9	223.5
					SLE Freq.	3298.8			0.0			0.0	13.5	600.1	136.0
					SLE Q.P.	2728.4			0.0			0.0	11.1	496.3	112.5
Camp.	4.62	9.24	9.24	910.0	4538.9	1415.0	22281.5	0.09	-6624.8	-22281.5	0.09				
					SLE Rare	0.0			-4072.2			16.4	0.0	167.0	741.5
					SLE Freq.	0.0			-3486.4			14.1	0.0	143.0	634.9
					SLE Q.P.	0.0			-3486.4			14.1	0.0	143.0	634.9
19	8.93	9.24	9.24			8081.0	22281.5	0.09	0.0	-22281.5	0.09				
					SLE Rare	6124.0			0.0			0.0	24.7	1115.2	251.2
					SLE Freq.	5626.1			0.0			0.0	22.7	1024.5	230.8
					SLE Q.P.	5524.8			0.0			0.0	22.3	1006.1	226.6
Trave Sez. 4 Rett. 40x70 [cm] di collegamento															
19	0.00	9.24	9.24			7997.3	22281.5	0.09	0.0	-22281.5	0.09				
					SLE Rare	6063.3			0.0			0.0	24.4	1104.1	248.7
					SLE Freq.	5585.6			0.0			0.0	22.5	1017.1	229.1
					SLE Q.P.	5488.4			0.0			0.0	22.1	999.4	225.1
Camp.	4.47	9.24	9.24	910.0	4538.9	0.0	22281.5	0.09	-4538.9	-22281.5	0.09				
					SLE Rare	0.0			-3491.4			14.1	0.0	143.2	635.8
					SLE Freq.	0.0			-3491.4			14.1	0.0	143.2	635.8
					SLE Q.P.	0.0			-3491.4			14.1	0.0	143.2	635.8
23	8.93	9.24	9.24			8012.0	22281.5	0.09	0.0	-22281.5	0.09				
					SLE Rare	6074.7			0.0			0.0	24.5	1106.2	249.2
					SLE Freq.	5596.9			0.0			0.0	22.6	1019.2	229.6
					SLE Q.P.	5499.7			0.0			0.0	22.2	1001.5	225.6
Trave Sez. 4 Rett. 40x70 [cm] di collegamento															
23	0.00	9.24	9.24			8096.2	22281.5	0.09	0.0	-22281.5	0.09				
					SLE Rare	6135.7			0.0			0.0	24.7	1117.3	251.7
					SLE Freq.	5637.7			0.0			0.0	22.7	1026.6	231.3
					SLE Q.P.	5536.4			0.0			0.0	22.3	1008.2	227.1
Camp.	4.32	9.24	9.24	910.0	4538.9	1381.9	22281.5	0.09	-6598.6	-22281.5	0.09				
					SLE Rare	0.0			-4074.4			16.4	0.0	167.1	742.0
					SLE Freq.	0.0			-3486.4			14.1	0.0	143.0	634.9
					SLE Q.P.	0.0			-3486.4			14.1	0.0	143.0	634.9
14	8.63	8.92	9.24			11697.7	21552.4	0.09	-6687.6	-22281.7	0.09				
					SLE Rare	5403.3			-375.2			1.5	22.1	982.9	222.8
					SLE Freq.	3282.2			0.0			0.0	13.4	597.0	135.3
					SLE Q.P.	2711.8			0.0			0.0	11.1	493.3	111.8

Da [m] A [m] Dx [m] cotg(θ) V_{Ed} [kg] V_{Rd,c} [kg] V_{Rcd} [kg] V_{Rd} [kg] T_{Ed} [kgm] T_{Rcd} [kgm] T_{Rsd} [kgm] Staffe

Trave 4 19 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.40	1.09	0.69	1.00	8571.7	10039.3	82670.5	36012.5	144.7	13294.2	9600.8	Ø 10 2br.	10.0'			
1.09	8.24	7.15	1.00	8308.9	10039.3	82670.5	24008.3	144.7	13294.2	6400.5	Ø 10 2br.	15.0'			
8.24	8.93	0.69	1.00	8804.6	10039.3	82670.5	36012.5	144.7	13294.2	9600.8	Ø 10 2br.	10.0'			
Trave 19 23 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.00	0.70	0.70	1.00	8613.9	10039.3	82670.5	36012.5	19.1	13294.2	9600.8	Ø 10 2br.	10.0'			
0.70	8.23	7.53	1.00	8123.9	10039.3	82670.5	24008.3	19.1	13294.2	6400.5	Ø 10 2br.	15.0'			
8.23	8.93	0.70	1.00	8613.9	10039.3	82670.5	36012.5	19.1	13294.2	9600.8	Ø 10 2br.	10.0'			
Trave 23 14 Sez. 4 Rett. 40x70 [cm] di collegamento															
0.00	0.69	0.69	1.00	8804.6	10039.3	82670.5	36012.5	148.7	13294.2	9600.8	Ø 10 2br.	10.0'			
0.69	7.84	7.15	1.00	8308.9	10039.3	82670.5	24008.3	148.7	13294.2	6400.5	Ø 10 2br.	15.0'			
7.84	8.53	0.69	1.00	8571.7	10039.3	82670.5	36012.5	148.7	13294.2	9600.8	Ø 10 2br.	10.0'			

Travata: Travata 9 Nodi 5 20 24 15

Nodo	x [m]	A _{fe} [cm ²]	A _{fi} [cm ²]	q _T [kg/m]	M _{rif} [kgm]	M _{de} [kgm]	M _{re} [kgm]	x/d	M _{di} [kgm]	M _{ri} [kgm]	x/d	σ _{be} [kg/cm ²]	σ _{bi} [kg/cm ²]	σ _{fe} [kg/cm ²]	σ _{fi} [kg/cm ²]	w mm
------	----------	---------------------------------------	---------------------------------------	--------------------------	---------------------------	--------------------------	--------------------------	-----	--------------------------	--------------------------	-----	--	--	--	--	---------

Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
5	0.30	8.92	9.24			11355.3	21552.4	0.09	-6339.7	-22281.7	0.09					
					SLE Rare	5361.7			-335.2			1.4	21.9	975.3	221.1	
					SLE Freq.	3282.4			0.0			0.0	13.4	597.1	135.3	0.0118
					SLE Q.P.	2722.7			0.0			0.0	11.1	495.3	112.3	0.0098
Camp.	4.62	9.24	9.24	910.0	4538.9	1236.8	22281.5	0.09	-6454.9	-22281.5	0.09					
					SLE Rare	0.0			-4056.0			16.4	0.0	166.4	738.6	
					SLE Freq.	0.0			-3486.4			14.1	0.0	143.0	634.9	0.0564
					SLE Q.P.	0.0			-3486.4			14.1	0.0	143.0	634.9	0.0564
20	8.93	9.24	9.24			8063.1	22281.5	0.09	0.0	-22281.5	0.09					
					SLE Rare	6111.8			0.0			0.0	24.6	1112.9	250.7	
					SLE Freq.	5621.9			0.0			0.0	22.7	1023.7	230.6	0.0205
					SLE Q.P.	5522.5			0.0			0.0	22.3	1005.6	226.5	0.0201
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
20	0.00	9.24	9.24			7980.2	22281.5	0.09	0.0	-22281.5	0.09					
					SLE Rare	6051.6			0.0			0.0	24.4	1102.0	248.2	
					SLE Freq.	5581.6			0.0			0.0	22.5	1016.4	229.0	0.0203
					SLE Q.P.	5486.2			0.0			0.0	22.1	999.0	225.0	0.0200
Camp.	4.47	9.24	9.24	910.0	4538.9	0.0	22281.5	0.09	-4538.9	-22281.5	0.09					
					SLE Rare	0.0			-3491.4			14.1	0.0	143.2	635.8	
					SLE Freq.	0.0			-3491.4			14.1	0.0	143.2	635.8	0.0565
					SLE Q.P.	0.0			-3491.4			14.1	0.0	143.2	635.8	0.0565
24	8.93	9.24	9.24			7987.6	22281.5	0.09	0.0	-22281.5	0.09					
					SLE Rare	6057.3			0.0			0.0	24.4	1103.0	248.5	
					SLE Freq.	5587.3			0.0			0.0	22.5	1017.4	229.2	0.0204
					SLE Q.P.	5491.9			0.0			0.0	22.1	1000.1	225.3	0.0200
Trave Sez. 4 Rett. 40x70 [cm] di collegamento																
24	0.00	9.24	9.24			8070.8	22281.5	0.09	0.0	-22281.5	0.09					
					SLE Rare	6117.6			0.0			0.0	24.7	1114.0	250.9	
					SLE Freq.	5627.7			0.0			0.0	22.7	1024.8	230.8	0.0205
					SLE Q.P.	5528.3			0.0			0.0	22.3	1006.7	226.8	0.0201
Camp.	4.32	9.24	9.24	910.0	4538.9	1171.0	22281.5	0.09	-6392.5	-22281.5	0.09					
					SLE Rare	0.0			-4057.1			16.4	0.0	166.4	738.8	
					SLE Freq.	0.0			-3486.4			14.1	0.0	143.0	634.9	0.0564
					SLE Q.P.	0.0			-3486.4			14.1	0.0	143.0	634.9	0.0564
15	8.63	8.92	9.24			11283.0	21552.4	0.09	-6283.5	-22281.7	0.09					
					SLE Rare	5353.4			-340.3			1.4	21.9	973.8	220.7	
					SLE Freq.	3274.1			0.0			0.0	13.4	595.6	135.0	0.0118
					SLE Q.P.	2714.4			0.0			0.0	11.1	493.7	111.9	0.0098

Da	A	Dx	cotg(θ)	V _{Ed}	V _{Rd,c}	V _{Rcd}	V _{Rd}	T _{Ed}	T _{Rcd}	T _{Rsd}	Staffe
[m]	[m]	[m]		[kg]	[kg]	[kg]	[kg]	[kgm]	[kgm]	[kgm]	

Trave 5 20 Sez. 4 Rett. 40x70 [cm] di collegamento											
0.40	1.09	0.69	1.00	8571.7	10039.3	82670.5	36012.5	146.9	13294.2	9600.8	∅ 10 2br. 10.0'
1.09	8.24	7.15	1.00	8308.9	10039.3	82670.5	24008.3	146.9	13294.2	6400.5	∅ 10 2br. 15.0'
8.24	8.93	0.69	1.00	8804.6	10039.3	82670.5	36012.5	146.9	13294.2	9600.8	∅ 10 2br. 10.0'
Trave 20 24 Sez. 4 Rett. 40x70 [cm] di collegamento											
0.00	0.70	0.70	1.00	8613.9	10039.3	82670.5	36012.5	12.8	13294.2	9600.8	∅ 10 2br. 10.0'
0.70	8.23	7.53	1.00	8123.9	10039.3	82670.5	24008.3	12.8	13294.2	6400.5	∅ 10 2br. 15.0'
8.23	8.93	0.70	1.00	8613.9	10039.3	82670.5	36012.5	12.8	13294.2	9600.8	∅ 10 2br. 10.0'
Trave 24 15 Sez. 4 Rett. 40x70 [cm] di collegamento											
0.00	0.69	0.69	1.00	8804.6	10039.3	82670.5	36012.5	150.6	13294.2	9600.8	∅ 10 2br. 10.0'
0.69	7.84	7.15	1.00	8308.9	10039.3	82670.5	24008.3	150.6	13294.2	6400.5	∅ 10 2br. 15.0'
7.84	8.53	0.69	1.00	8571.7	10039.3	82670.5	36012.5	150.6	13294.2	9600.8	∅ 10 2br. 10.0'

VERIFICA TRAVE DI COLLEGAMENTO 60x20 inglobata nel pavimento industriale

geometria trave:

Base = 60cm.

Altezza = 20 cm.

Area cls = 1200 cm²

area ferro 4+4 Ø 14 B450C = 12,32 cm²

N_{sd} = 66400 kg.

Categoria topografica	S _T
T1	1,0
T2	1,2
T3	1,2
T4	1,4

Categoria suolo	S _s
A	1
B	$1,00 \leq 1,40 - 0,40 F_o \times a_g / g \leq 1,20$
C	$1,00 \leq 1,70 - 0,60 F_o \times a_g / g \leq 1,50$
D	$0,90 \leq 2,40 - 1,50 F_o \times a_g / g \leq 1,80$
E	$1,00 \leq 2,00 - 1,10 F_o \times a_g / g \leq 1,60$

$$S = S_s \cdot S_T = 1,5 \times 1 = 1,5$$

$$a_{\max} = a_g \cdot S = 1,744 \times 1,5 = 2,616$$

$$F = \pm 0,3 \cdot N_{sd} \cdot a_{\max} / g \text{ profilo B}$$

$$F = \pm 0,4 \cdot N_{sd} \cdot a_{\max} / g \text{ profilo C}$$

$$F = \pm 0,6 \cdot N_{sd} \cdot a_{\max} / g \text{ profilo D}$$

$$F = \pm 0,4 \cdot N_{sd} \cdot a_{\max} / g = \pm 4632 \text{ kg}$$

VERIFICA A TRAZIONE

$$\sigma_a = F/A_f = 376 \text{ kg/cm}^2 \text{ verifica soddisfatta}$$

VERIFICA A COMPRESSIONE

$$A_{omog.} = 1200 + 15 \times 12,32 = 1385 \text{ cm}^2$$

Si omette la verifica a carico di punta, in quanto la trave è inglobata nel pavimento industriale

$$\sigma_c = F / A_{omog.} = 3,34 \text{ kg/cm}^2 \quad \text{verifica soddisfatta.}$$

Verifica cedimenti (SLE-SLD) A BREVE TERMINE

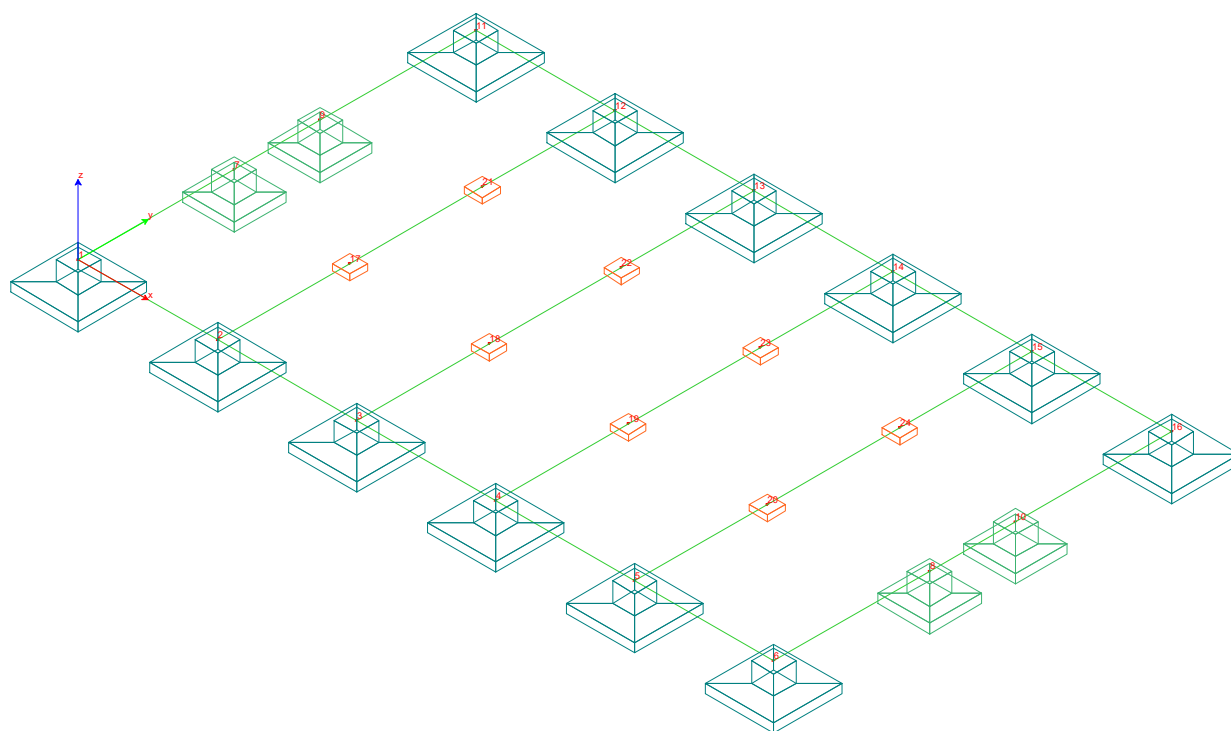


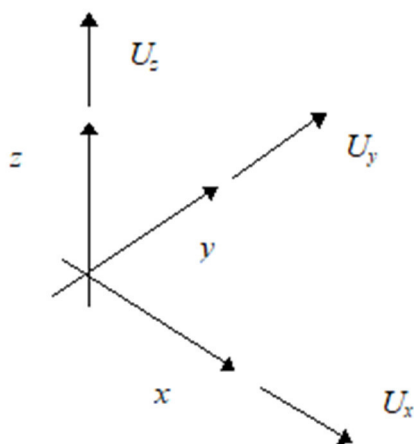
Tabella delle combinazioni di carico presentate come involuppi

Commento	Sigla Combinazione	Combinazioni utilizzate																											
SLE Rare	SLE Rare +-	37	38	39	40	41	42	43	44	45	46	47	48																
SLE Frequenti	SLE Frequenti +-	49	50	51	52	53	54																						
SLE Quasi Permanenti	SLE Quasi Permanenti +-	55																											
SLD	SLD +-	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79				

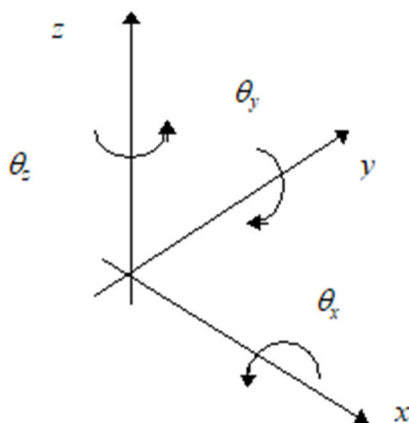
Spostamenti nodali

Convenzioni adottate

La terna di riferimento generale è destrorsa per cui si hanno i seguenti segni positivi per le componenti di spostamento nodale:



e per quanto riguarda le rotazioni:



Nel seguito vengono riportate, per ogni nodo (con esclusione dei nodi K che definiscono l'orientamento delle aste e quindi, essendo bloccati, hanno componenti di spostamento nulle), le componenti di spostamento in tutte le combinazioni di carico definite.

Nodo	Comb.	Uz [cm]	Rx [°]	Ry [°]	Rz [°]
1	SLE Rare -	-0.33	-0.01	-0.00	0.00
	SLE Rare +	-0.32	0.00	0.01	0.00
	SLE Frequenti -	-0.32	-0.00	0.00	0.00
	SLE Frequenti +	-0.31	-0.00	0.00	0.00
	SLE Quasi Permanenti -	-0.31	-0.00	0.00	0.00

Nodo	Comb.	Uz [cm]	Rx [°]	Ry [°]	Rz [°]
	SLE Quasi Permanenti +	-0.31	-0.00	0.00	0.00
	SLD -	-0.33	-0.02	-0.02	0.00
	SLD +	-0.30	0.02	0.03	0.00
2	SLE Rare -	-0.41	-0.01	-0.00	0.00
	SLE Rare +	-0.39	0.02	0.00	0.00

Nodo	Comb.	Uz [cm]	Rx [°]	Ry [°]	Rz [°]
	SLE Frequenti -	-0.39	-0.00	0.00	0.00
	SLE Frequenti +	-0.38	0.01	0.00	0.00
	SLE Quasi Permanenti -	-0.38	0.00	0.00	0.00
	SLE Quasi Permanenti +	-0.38	0.00	0.00	0.00
	SLD -	-0.40	-0.02	-0.02	0.00
	SLD +	-0.37	0.03	0.02	0.00
3	SLE Rare -	-0.41	-0.01	-0.00	0.00
	SLE Rare +	-0.39	0.02	0.00	0.00
	SLE Frequenti -	-0.39	-0.00	-0.00	0.00
	SLE Frequenti +	-0.38	0.01	0.00	0.00
	SLE Quasi Permanenti -	-0.38	0.00	-0.00	0.00
	SLE Quasi Permanenti +	-0.38	0.00	-0.00	0.00
	SLD -	-0.40	-0.03	-0.02	0.00
	SLD +	-0.37	0.03	0.02	0.00
4	SLE Rare -	-0.41	-0.01	-0.00	0.00
	SLE Rare +	-0.39	0.02	0.00	0.00
	SLE Frequenti -	-0.39	-0.00	-0.00	0.00
	SLE Frequenti +	-0.38	0.01	0.00	0.00
	SLE Quasi Permanenti -	-0.38	0.00	0.00	0.00
	SLE Quasi Permanenti +	-0.38	0.00	0.00	0.00
	SLD -	-0.40	-0.03	-0.02	0.00
	SLD +	-0.37	0.03	0.02	0.00
5	SLE Rare -	-0.41	-0.01	-0.00	0.00
	SLE Rare +	-0.39	0.02	0.00	0.00
	SLE Frequenti -	-0.39	-0.00	-0.00	0.00
	SLE Frequenti +	-0.38	0.01	-0.00	0.00
	SLE Quasi Permanenti -	-0.38	0.00	-0.00	0.00
	SLE Quasi Permanenti +	-0.38	0.00	-0.00	0.00
	SLD -	-0.40	-0.02	-0.02	0.00
	SLD +	-0.37	0.03	0.02	0.00
6	SLE Rare -	-0.33	-0.01	-0.01	0.00
	SLE Rare +	-0.32	0.00	0.00	0.00
	SLE Frequenti -	-0.32	-0.00	-0.00	0.00
	SLE Frequenti +	-0.31	-0.00	-0.00	0.00
	SLE Quasi Permanenti -	-0.31	-0.00	-0.00	0.00
	SLE Quasi Permanenti +	-0.31	-0.00	-0.00	0.00
	SLD -	-0.33	-0.02	-0.03	0.00
	SLD +	-0.30	0.02	0.02	0.00
7	SLE Rare -	-0.32	0.00	-0.04	0.00
	SLE Rare +	-0.32	0.01	0.04	0.00
	SLE Frequenti -	-0.32	0.00	-0.01	0.00
	SLE Frequenti +	-0.32	0.00	0.01	0.00
	SLE Quasi Permanenti -	-0.32	0.00	0.00	0.00
	SLE Quasi Permanenti +	-0.32	0.00	0.00	0.00
	SLD -	-0.34	-0.02	-0.04	0.00
	SLD +	-0.30	0.03	0.04	0.00
8	SLE Rare -	-0.32	0.00	-0.04	0.00
	SLE Rare +	-0.32	0.01	0.04	0.00
	SLE Frequenti -	-0.32	0.00	-0.01	0.00
	SLE Frequenti +	-0.32	0.00	0.01	0.00
	SLE Quasi Permanenti -	-0.32	0.00	-0.00	0.00
	SLE Quasi Permanenti +	-0.32	0.00	-0.00	0.00
	SLD -	-0.34	-0.02	-0.04	0.00
	SLD +	-0.30	0.03	0.04	0.00
9	SLE Rare -	-0.32	-0.01	-0.04	0.00
	SLE Rare +	-0.32	-0.00	0.04	0.00

Nodo	Comb.	Uz [cm]	Rx [°]	Ry [°]	Rz [°]
	SLE Frequenti -	-0.32	-0.00	-0.01	0.00
	SLE Frequenti +	-0.32	-0.00	0.01	0.00
	SLE Quasi Permanenti -	-0.32	-0.00	0.00	0.00
	SLE Quasi Permanenti +	-0.32	-0.00	0.00	0.00
	SLD -	-0.34	-0.03	-0.04	0.00
	SLD +	-0.30	0.02	0.04	0.00
10	SLE Rare -	-0.32	-0.01	-0.04	0.00
	SLE Rare +	-0.32	-0.00	0.04	0.00
	SLE Frequenti -	-0.32	-0.00	-0.01	0.00
	SLE Frequenti +	-0.32	-0.00	0.01	0.00
	SLE Quasi Permanenti -	-0.32	-0.00	-0.00	0.00
	SLE Quasi Permanenti +	-0.32	-0.00	-0.00	0.00
	SLD -	-0.34	-0.03	-0.04	0.00
	SLD +	-0.30	0.02	0.04	0.00
11	SLE Rare -	-0.33	-0.00	-0.00	0.00
	SLE Rare +	-0.32	0.01	0.01	0.00
	SLE Frequenti -	-0.32	0.00	0.00	0.00
	SLE Frequenti +	-0.31	0.00	0.00	0.00
	SLE Quasi Permanenti -	-0.31	0.00	0.00	0.00
	SLE Quasi Permanenti +	-0.31	0.00	0.00	0.00
	SLD -	-0.33	-0.02	-0.02	0.00
	SLD +	-0.30	0.02	0.03	0.00
12	SLE Rare -	-0.41	-0.02	-0.00	0.00
	SLE Rare +	-0.39	0.01	0.00	0.00
	SLE Frequenti -	-0.39	-0.01	0.00	0.00
	SLE Frequenti +	-0.38	0.00	0.00	0.00
	SLE Quasi Permanenti -	-0.38	-0.00	0.00	0.00
	SLE Quasi Permanenti +	-0.38	-0.00	0.00	0.00
	SLD -	-0.40	-0.03	-0.02	0.00
	SLD +	-0.37	0.02	0.02	0.00
13	SLE Rare -	-0.41	-0.02	-0.00	0.00
	SLE Rare +	-0.40	0.01	0.00	0.00
	SLE Frequenti -	-0.39	-0.01	-0.00	0.00
	SLE Frequenti +	-0.39	0.00	0.00	0.00
	SLE Quasi Permanenti -	-0.39	-0.00	-0.00	0.00
	SLE Quasi Permanenti +	-0.39	-0.00	-0.00	0.00
	SLD -	-0.40	-0.03	-0.02	0.00
	SLD +	-0.37	0.03	0.02	0.00
14	SLE Rare -	-0.41	-0.02	-0.00	0.00
	SLE Rare +	-0.40	0.01	0.00	0.00
	SLE Frequenti -	-0.39	-0.01	-0.00	0.00
	SLE Frequenti +	-0.39	0.00	0.00	0.00
	SLE Quasi Permanenti -	-0.39	-0.00	0.00	0.00
	SLE Quasi Permanenti +	-0.39	-0.00	0.00	0.00
	SLD -	-0.40	-0.03	-0.02	0.00
	SLD +	-0.37	0.03	0.02	0.00
15	SLE Rare -	-0.41	-0.02	-0.00	0.00
	SLE Rare +	-0.39	0.01	0.00	0.00
	SLE Frequenti -	-0.39	-0.01	-0.00	0.00
	SLE Frequenti +	-0.38	0.00	-0.00	0.00
	SLE Quasi Permanenti -	-0.38	-0.00	-0.00	0.00
	SLE Quasi Permanenti +	-0.38	-0.00	-0.00	0.00
	SLD -	-0.40	-0.03	-0.02	0.00
	SLD +	-0.37	0.02	0.02	0.00
16	SLE Rare -	-0.33	-0.00	-0.01	0.00
	SLE Rare +	-0.32	0.01	0.00	0.00

Nodo	Comb.	Uz [cm]	Rx [°]	Ry [°]	Rz [°]
	SLE Frequenti -	-0.32	0.00	-0.00	0.00
	SLE Frequenti +	-0.31	0.00	-0.00	0.00
	SLE Quasi Permanenti -	-0.31	0.00	-0.00	0.00
	SLE Quasi Permanenti +	-0.31	0.00	-0.00	0.00
	SLD -	-0.33	-0.02	-0.03	0.00
	SLD +	-0.30	0.02	0.02	0.00
17	SLE Rare -	-0.29	0.00	-0.00	0.00
	SLE Rare +	-0.26	0.01	0.00	0.00
	SLE Frequenti -	-0.28	0.01	0.00	0.00
	SLE Frequenti +	-0.27	0.01	0.00	0.00
	SLE Quasi Permanenti -	-0.28	0.01	0.00	0.00
	SLE Quasi Permanenti +	-0.28	0.01	0.00	0.00
	SLD -	-0.31	-0.00	-0.01	0.00
	SLD +	-0.24	0.01	0.02	0.00
18	SLE Rare -	-0.29	0.00	-0.00	0.00
	SLE Rare +	-0.26	0.01	0.00	0.00
	SLE Frequenti -	-0.28	0.01	-0.00	0.00
	SLE Frequenti +	-0.27	0.01	0.00	0.00
	SLE Quasi Permanenti -	-0.28	0.01	-0.00	0.00
	SLE Quasi Permanenti +	-0.28	0.01	-0.00	0.00
	SLD -	-0.31	-0.00	-0.02	0.00
	SLD +	-0.24	0.01	0.02	0.00
19	SLE Rare -	-0.29	0.00	-0.00	0.00
	SLE Rare +	-0.26	0.01	0.00	0.00
	SLE Frequenti -	-0.28	0.01	-0.00	0.00
	SLE Frequenti +	-0.27	0.01	0.00	0.00
	SLE Quasi Permanenti -	-0.28	0.01	0.00	0.00
	SLE Quasi Permanenti +	-0.28	0.01	0.00	0.00
	SLD -	-0.31	-0.00	-0.02	0.00
	SLD +	-0.24	0.01	0.02	0.00
20	SLE Rare -	-0.29	0.00	-0.00	0.00
	SLE Rare +	-0.26	0.01	0.00	0.00
	SLE Frequenti -	-0.28	0.01	-0.00	0.00
	SLE Frequenti +	-0.27	0.01	-0.00	0.00
	SLE Quasi Permanenti -	-0.28	0.01	-0.00	0.00
	SLE Quasi Permanenti +	-0.28	0.01	-0.00	0.00

Nodo	Comb.	Uz [cm]	Rx [°]	Ry [°]	Rz [°]
	SLD -	-0.31	-0.00	-0.02	0.00
	SLD +	-0.24	0.01	0.01	0.00
21	SLE Rare -	-0.29	-0.01	-0.00	0.00
	SLE Rare +	-0.26	-0.00	0.00	0.00
	SLE Frequenti -	-0.28	-0.01	0.00	0.00
	SLE Frequenti +	-0.27	-0.01	0.00	0.00
	SLE Quasi Permanenti -	-0.28	-0.01	0.00	0.00
	SLE Quasi Permanenti +	-0.28	-0.01	0.00	0.00
	SLD -	-0.31	-0.01	-0.01	0.00
	SLD +	-0.24	0.00	0.02	0.00
22	SLE Rare -	-0.29	-0.01	-0.00	0.00
	SLE Rare +	-0.26	-0.00	0.00	0.00
	SLE Frequenti -	-0.28	-0.01	-0.00	0.00
	SLE Frequenti +	-0.27	-0.01	0.00	0.00
	SLE Quasi Permanenti -	-0.28	-0.01	-0.00	0.00
	SLE Quasi Permanenti +	-0.28	-0.01	-0.00	0.00
	SLD -	-0.31	-0.01	-0.02	0.00
	SLD +	-0.24	0.00	0.02	0.00
23	SLE Rare -	-0.29	-0.01	-0.00	0.00
	SLE Rare +	-0.26	-0.00	0.00	0.00
	SLE Frequenti -	-0.28	-0.01	-0.00	0.00
	SLE Frequenti +	-0.27	-0.01	0.00	0.00
	SLE Quasi Permanenti -	-0.28	-0.01	0.00	0.00
	SLE Quasi Permanenti +	-0.28	-0.01	0.00	0.00
	SLD -	-0.31	-0.01	-0.02	0.00
	SLD +	-0.24	0.00	0.02	0.00
24	SLE Rare -	-0.29	-0.01	-0.00	0.00
	SLE Rare +	-0.26	-0.00	0.00	0.00
	SLE Frequenti -	-0.28	-0.01	-0.00	0.00
	SLE Frequenti +	-0.27	-0.01	-0.00	0.00
	SLE Quasi Permanenti -	-0.28	-0.01	-0.00	0.00
	SLE Quasi Permanenti +	-0.28	-0.01	-0.00	0.00
	SLD -	-0.31	-0.01	-0.02	0.00
	SLD +	-0.24	0.00	0.01	0.00

Tali valori risultano compatibili con la funzionalità dell'opera.