وزارة النقل
الهيئة العامة للطرق والكباري
القطار الكهربائي السريع Electric Express Train
SYSTRA SHAKER
ENGINEERING CONSULTING OFFICE
المكتب الاستشاري الهندسي
أ.د. خالد قنديل
القاهرة للطرق والإنشاءات

مشروع القطار الكهربائى السريع

المقايسة المعدلة لبنود الاعمال للقطاع السابع (فوكه - مطروح) - شركة القاهرة للطرق والإنشاءات - اتجاه سيدي كرير

القطاع من المحطة 500+520 إلي المحطة 000+521

رقم البند	بيان الأعمال	الوحدة	الكمية	الفئة	الاجمالى
1	**اعمال الازالة و التطهير**				
1-1	بالمتر المسطح اصل تطهير الموقع من الاشجار والمزروعات و المخلفات فى مناطق الدلتا ذات الطبيعة الزراعية الكثيفة والتخلص منها بالمقالب العمومية تمهيدا لاصل الرفع المساحى لكامل حدود المشروع طبقا للشروط والمواصفات و تعليمات المهندس المشرف.	م2	10,000	5.00	50,000.00
2	**اعمال الحفر**				
2-1	بالمتر المكعب اصل حفر باستخدام المعدات الميكانيكية فى التربة المتماسكة عدا التربة الصخرية (باستخدام البلدوزر) وتسوية السطح بالات التسوية وفرش بالمياه الاصولية للوصول الى نسبة الرطوبة المطلوبة والدمك الجيد بالمواسات للوصول الى القصى كثافة جافة (95% من الكثافة الجافة القصوى) ومحمل على البند تحميل ونقل الاتربة الزائدة لمسافة 500 متر من محور الطريق و يتم التنفيذ طبقا للمناسيب التصميمية والقطاعات العرضية النموذجية والرسومات التفصيلية المعتمدة والبند بجميع مشتملاته طبقا لاصول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف. يتم إحتساب علاوة 1 جنيه لكل 1 كم بالزيادة.	م3	49,995.025	20.10	1,004,900.00
3	**اعمال الردم**				
3-1	بالمتر المكعب اصل توريد وتشغيل تربة صالحة للردم و مطابقة للمواصفات والتشغيل باستخدام الات التسوية بسمك لا يزيد عن 50 سم حتى منسوب -2 متر و بسمك لا يزيد عن 25 سم لاستكمال المنسوب التصميمى لتشكيل الجسر والاكتاف (نسبة تحمل كاليفورنيا لا تقل عن 15%) و رشها بالمياه الاصولية للوصول الى نسبة الرطوبة المطلوبة والدمك الجيد بالمواسات للوصول الى القصى كثافة جافة (95 % من الكثافة الجافة القصوى) ويتم التنفيذ طبقا للمناسيب التصميمية والقطاعات العرضية النموذجية والرسومات التفصيلية المعتمدة والبند بجميع مشتملاته طبقا لاصول الصناعة ومواصفات الهيئة العامة للطرق و الكباري وتعليمات المهندس المشرف. -في حالة طلب جهاز الإشراف زيادة نسبة الدمك عن 95 % يحسب زيادة 1 جنية على زيادة نسبة الدمك لكل 1 % - مسافة نقل 2 كم ويتم احتساب علاوة 1.4 جنيه لكل 1 كم بالزيادة أو النقصان -السعر يشمل عمل تشويتات وتخليط واختبارات ونقل لمواقع العمل حتى مسافة 2 كم -السعر يشمل قيمة المادة المحجرية طبقا لافادة المنطقة بهذا القطاع (7) من الكم 504 إلي 568	م3	298,555.795	85.00	25,377,242.59
	علاوة مسافة النقل 223.5 كم	م3	298,555.795	310.10	92,582,152.07
	علاوة تحصيل رسوم الكارتة والموازين طبقا للائحة الشركة الوطنية	م3	298,555.795	13.00	3,881,225.34
4	**طبقات الاساس**				
4-1	بالمتر المكعب اصل توريد وفرش طبقة تاسيس (prepared Subgrade) من الاحجار الصلبة المتدرجة ناتج تكسير الكسارات والمطابقة للمواصفات وأقصي حجم للحبيبات 100 مم والا تزيد نسبة المار من منخل 200 عن 12 % و التدرج الوارد بالاشتراطات الخاصة بالمشروع لا تقل نسبة تحمل كاليفورنيا عن 25 % و الا تزيد نسبة الفاقد بجهاز لوس انجلوس عن 30 % والا يزيد الامتصاص عن 15% و الا يقل معامل المرونة (Ev2) من تجربة لوح التحميل عن 80 ميجابسكل و يتم فردها علي طبقتين باستخدام الات التسوية الحديثة علي ان لا يزيد سمك الطبقة بعد تمام الدمك عن 25 سم و رشها بالمياة الاصولية للوصول الي نسبة الرطوبة المطلوبة والدمك الجيد للهراسات للوصول الي القصي كثافة جافة قصوي (لاتقل عن 95 %) من الكثافة المعملية والفنة تشمل اجراء التجارب المعملية والحقلية ويتم التنفيذ طبقا لاصول الصناعة والرسومات التفصيلية المعتمدة والبند بجميع مشتملاته طبقا للمواصفات الفنية للمشروع وتقرير الاستشاري وتعليمات المهندس المشرف -مسافة النقل لا تقل عن 20 كم - يتم احتساب علاوة 1.2 جنيه لكل 1 كم بالزيادة او النقصان -السعر يشمل قيمة المادة المحجرية طبقا لافادة المنطقة بهذا القطاع (7) من الكم 504 إلي 568	م3	4,100.00	278.00	1,139,800.00
	علاوة مسافة النقل 79 كم		4,100.00	70.80	290,280.00
	علاوة تحصيل رسوم الكارتة والموازين طبقا للائحة الشركة الوطنية		4,100.00	25.00	102,500.00
4-2	بالمتر المكعب أعمال توريد وفرش طبقة أساس من الاحجار الصلبة المتدرجة ناتج تكسير الكسارات والمطابقة للمواصفات وأقصي حجم للحبيبات ما بين 31.5 مم الي 40 مم والا يزيد نسبة المار من منخل 200 عن 5% والتدرج الوارد بالاشتراطات الخاصة بالمشروع لا تقل نسبة تحمل كاليفورنيا عن 80 % والا يقل معامل المرونة (Ev2) من تجربة لوح التحميل عن 120 ميجابسكل والا يزيد نسبة الفاقد بجهاز لوس انجلوس عن 30 % والا يزيد الامتصاص عن 15 % ويتم فردها علي طبقتين باستخدام الات التسوية الحديثة علي ان لا يزيد سمك الطبقة بعد تمام الدمك عن 20 سم و رشها بالمياة الاصولية للوصول الي نسبة الرطوبة المطلوبة والدمك الجيد بالهراسات للوصول الي القصي كثافة جافة قصوي (لا يقل عن 100%) من الكثافة المعملية و الفنة تشمل اجراء التجارب المعملية والحقلية ويتم تنفيذ طبقا لاصول الصناعة والرسومات التفصيلية المعتمدة والبند بجميع مشتملاته طبقا للمواصفات الفنية للمشروع وتقرير الاستشاري وتعليمات المهندس المشرف . -مسافة النقل لا تقل عن 20 كم - يتم احتساب علاوة 1.2 جنيه لكل 1 كم بالزيادة او النقصان -السعر يشمل قيمة المادة المحجرية طبقا لافادة المنطقة بهذا القطاع (7) من الكم 504 إلي 568	م3	3,000.00	298.00	894,000.00
	علاوة مسافة النقل 229 كم		3,000.00	250.80	752,400.00
	علاوة تحصيل رسوم الكارتة والموازين طبقا للائحة الشركة الوطنية		3,000.00	25.00	75,000.00
5	**البلاطات الخرسانية**				
5-1	بالمتر المسطح أعمال توريد وصب خرسانة عادية سمك 15 سم لحماية الأكتاف والميول الجانبية تتكون من 0.8 م3 من دولومايت متدرج + 0.4 م3 رمل حرش + 280 كجم أسمنت بورتلاندي عادي واضافة Fiber reinforcement على أن يكون الدمن نظيف ومغسول والرمل خالي من الشوائب والطفلة والأملاح والمواد الغريبة والبند يشمل تجهيز واستعمال مناسيب التربة الطبيعية أسفل البلاطة للوصول إلي المناسيب التصميمية على أن تحقق الخرسانة إجهاد لا يقل عن 250 كجم / سم2 وتتطلب السطح والتنفيذ طبقاً لأصول الصناعة والرسومات التفصيلية المعتمدة والبند بجميع مشتملاته طبقاً لمواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف .	م2	33,100.000	355.00	11,750,500.00
	الإجمالى				137,900,000.00
	(مائة وسبعة وثلاثون مليون وتسعمائة الف جنيه لاغير)				

مدير المشروع المقاول
م / عبدالرحمن عادل

مدير المشروع الاستشاري
م / خالد فوزي

مدير المالك
م / ابراهيم الحناوي

مدير عام المشروعات
م / محمد حسني فياض

يعتمد
رئيس الادارة المركزية
منطقة غرب الدلتا
الاسكندرية - مرسى مطروح
عميد مهندس /
" هانى محمد محمود طه "

القاهرة للطرق والإنشاءات
س.ت: ١٠٦٧٠٥
ض: ٠٢٦ - ٥٩٢ - ٥٢٥

المكتب الاستشاري الهندسي
أ.د. خالد فوزي
مشروع القطار الكهربائي السريع
القطاع السابع

Owner Consultant | Contractor Consultant | Contarctor | Owner

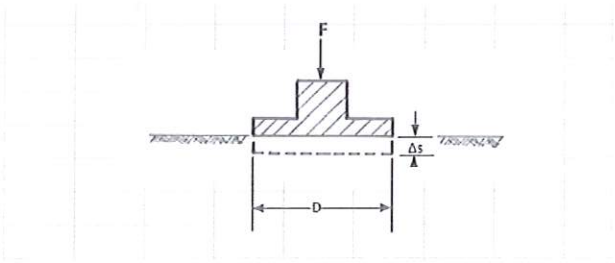
Plate Load Test Results

Company Name	CAIRO COMPANY				
Location	520+500	To	520+700	Station	520+525
Taste Date	8-09-2023				
Layer level	**p.s.g +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.83	19.80		0.170	0.200		0.185
2.000	17.1	5.652	0.08	19.70	19.60		0.300	0.400		0.350
0.080	34.2	11.304	0.16	19.50	19.30		0.500	0.700		0.600
4.000	53.3	17.663	0.25	19.40	19.10		0.600	0.900		0.750
5.000	70.5	23.315	0.33	19.25	18.85		0.750	1.150		0.950
6.000	89.8	29.673	0.42	19.10	18.55		0.900	1.450		1.175
7.000	106.8	35.325	0.50	18.90	18.41		1.100	1.590		1.345
8.000	53.4	17.663	0.25	18.92	18.47		1.080	1.530		1.305
9.000	26.7	8.831	0.12	19.00	18.56		1.000	1.440		1.220
9.000	2.1	0.707	0.01	19.11	18.70		0.890	1.300		1.095
10.000	2.1	0.707	0.01	19.11	18.70		0.890	1.300		1.095
11.000	17.1	5.652	0.08	19.08	18.68		0.920	1.320		1.120
12.000	34.2	11.304	0.16	19.04	18.60		0.960	1.400		1.180
13.000	53.3	17.663	0.25	18.98	18.55		1.020	1.450		1.235
14.000	70.5	23.315	0.33	18.92	18.48		1.080	1.520		1.300
15.000	89.8	29.673	0.42	18.89	18.42		1.110	1.580		1.345

		s	ΔS	Δσ
0.7 σ_1	0.35	1.02625	0.4575	0.2
0.3 σ_1	0.15	0.56875		
0.7σ_2	0.35	1.31	0.165	0.2
0.3σ_2	0.15	1.145		
D (mm)	300			
Ev_1	98.36			
Ev_2	272.73			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.77		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

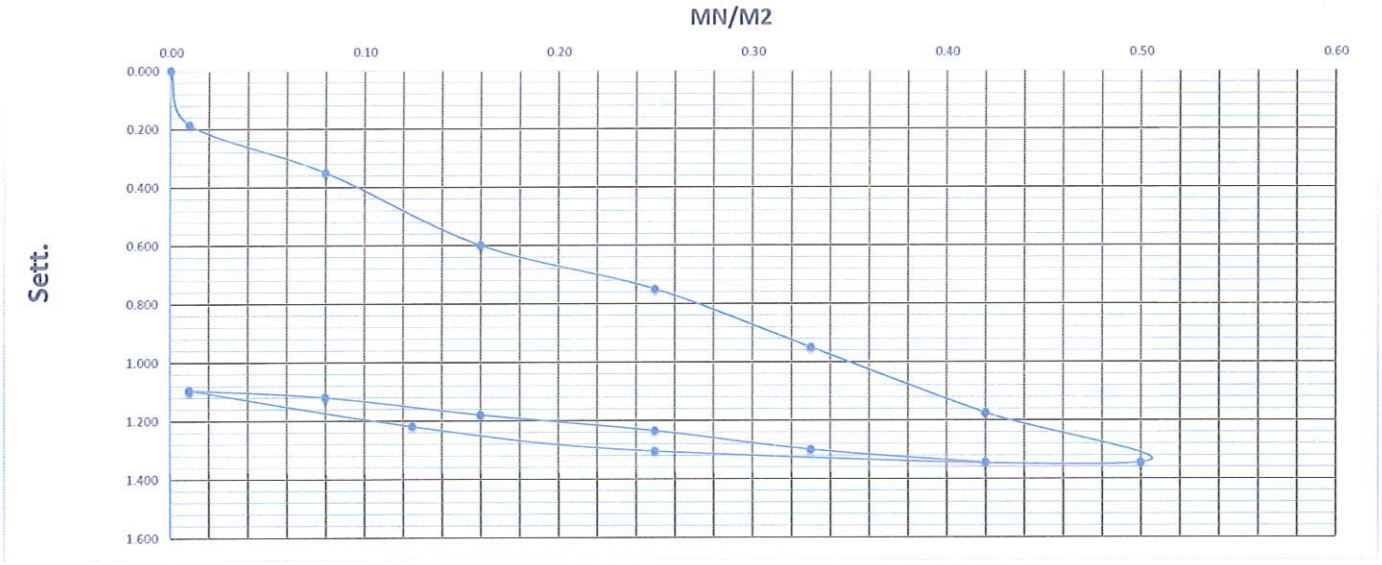
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name :
Sign :	Sign :	Sign :

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9/2/2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

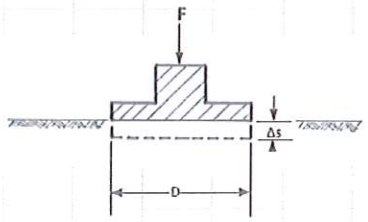
Plate Load Test Results

Company Name	CAIRO COMPANY				
Location	520+500	To	520+700	Station	520+550
Taste Date	8-09-2023				
Layer level	**p.s.g +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.85	19.85		0.150	0.150		0.150
2.000	17.1	5.652	0.08	19.76	19.80		0.240	0.200		0.220
0.080	34.2	11.304	0.16	19.62	19.64		0.380	0.360		0.370
4.000	53.3	17.663	0.25	19.42	19.45		0.580	0.550		0.565
5.000	70.5	23.315	0.33	19.26	19.30		0.740	0.700		0.720
6.000	89.8	29.673	0.42	19.18	19.20		0.820	0.800		0.810
7.000	106.8	35.325	0.50	19.05	19.05		0.950	0.950		0.950
8.000	53.4	17.663	0.25	19.12	19.14		0.880	0.860		0.870
9.000	26.7	8.831	0.12	19.18	19.20		0.820	0.800		0.810
9.000	2.1	0.707	0.01	19.29	19.30		0.710	0.700		0.705
10.000	2.1	0.707	0.01	19.29	19.30		0.710	0.700		0.705
11.000	17.1	5.652	0.08	19.28	19.29		0.720	0.710		0.715
12.000	34.2	11.304	0.16	19.20	19.22		0.800	0.780		0.790
13.000	53.3	17.663	0.25	19.16	19.15		0.840	0.850		0.845
14.000	70.5	23.315	0.33	19.10	19.12		0.900	0.880		0.890
15.000	89.8	29.673	0.42	19.07	19.08		0.930	0.920		0.925

		s	ΔS	Δσ
0.7 σ_1	0.35	0.6875	0.33625	0.2
0.3 σ_1	0.15	0.35125		
0.7σ_2	0.35	0.89778	0.17278	0.2
0.3σ_2	0.15	0.725		
D (mm)	300			
Ev_1	133.83			
Ev_2	260.45			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.95		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

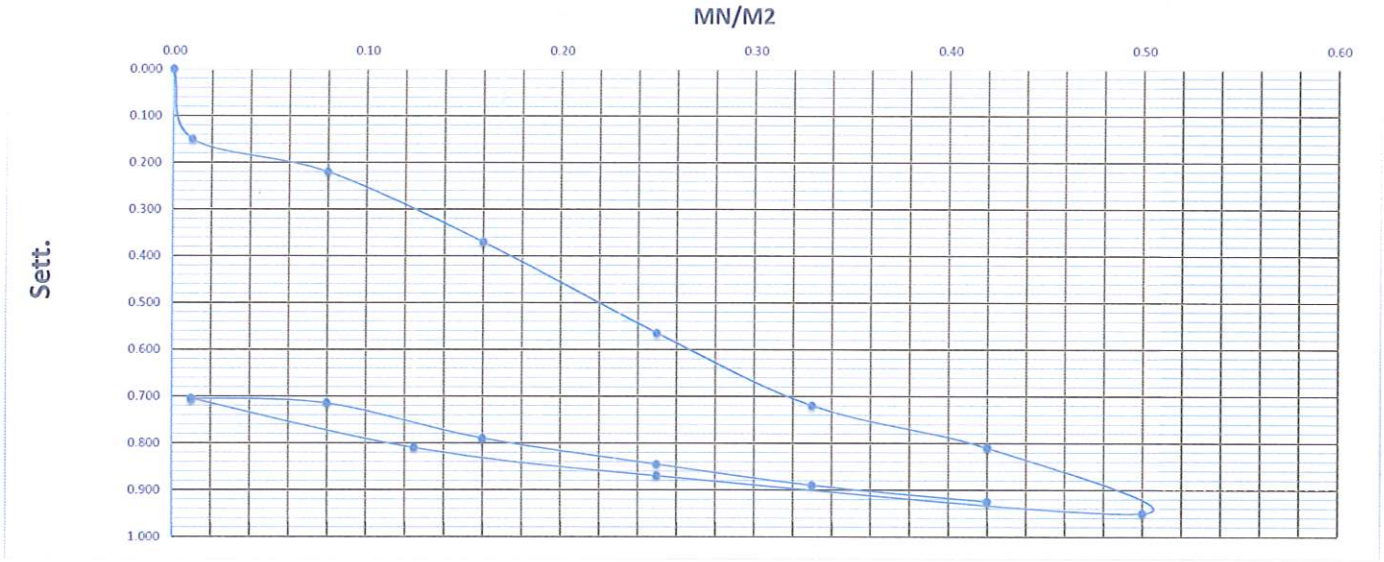
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name :
Sign :	Sign :	Sign :

المعمل المركزى رقم (١) - القطاع الشرقى - الطريق الدائرى - مطروح

As

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

Company Name	CAIRO COMPANY				
Location	520+500	To	520+700	Station	520+575
Taste Date	8-09-2023				
Layer level	**p.s.g +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

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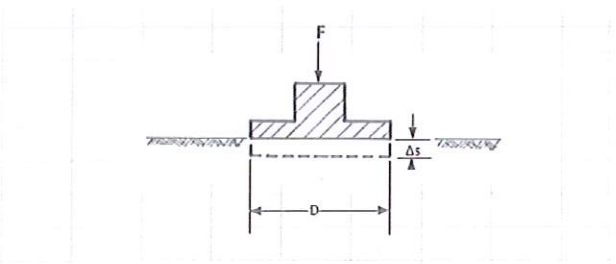


F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.89	19.78		0.110	0.220		0.165
2.000	17.1	5.652	0.08	19.50	19.50		0.500	0.500		0.500
0.080	34.2	11.304	0.16	19.40	19.20		0.600	0.800		0.700
4.000	53.3	17.663	0.25	19.20	19.02		0.800	0.980		0.890
5.000	70.5	23.315	0.33	19.10	18.74		0.900	1.260		1.080
6.000	89.8	29.673	0.42	18.90	18.48		1.100	1.520		1.310
7.000	106.8	35.325	0.50	18.72	18.32		1.280	1.680		1.480
8.000	53.4	17.663	0.25	18.79	18.41		1.210	1.590		1.400
9.000	26.7	8.831	0.12	18.85	18.56		1.150	1.440		1.295
9.000	2.1	0.707	0.01	19.02	18.66		0.980	1.340		1.160
10.000	2.1	0.707	0.01	19.02	18.66		0.980	1.340		1.160
11.000	17.1	5.652	0.08	18.98	18.61		1.020	1.390		1.205
12.000	34.2	11.304	0.16	18.91	18.54		1.090	1.460		1.275
13.000	53.3	17.663	0.25	18.86	18.48		1.140	1.520		1.330
14.000	70.5	23.315	0.33	18.80	18.42		1.200	1.580		1.390
15.000	89.8	29.673	0.42	18.74	18.35		1.260	1.650		1.455

		s	ΔS	Δσ
0.7 σ_1	0.35	1.16125	0.48625	0.2
0.3 σ_1	0.15	0.675		
0.7σ_2	0.35	1.40444	0.15444	0.2
0.3σ_2	0.15	1.25		
D (mm)	300			
Ev_1	92.54			
Ev_2	291.38			
Area (Sq.m)	0.07065			

Ev2/Ev1	3.15		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

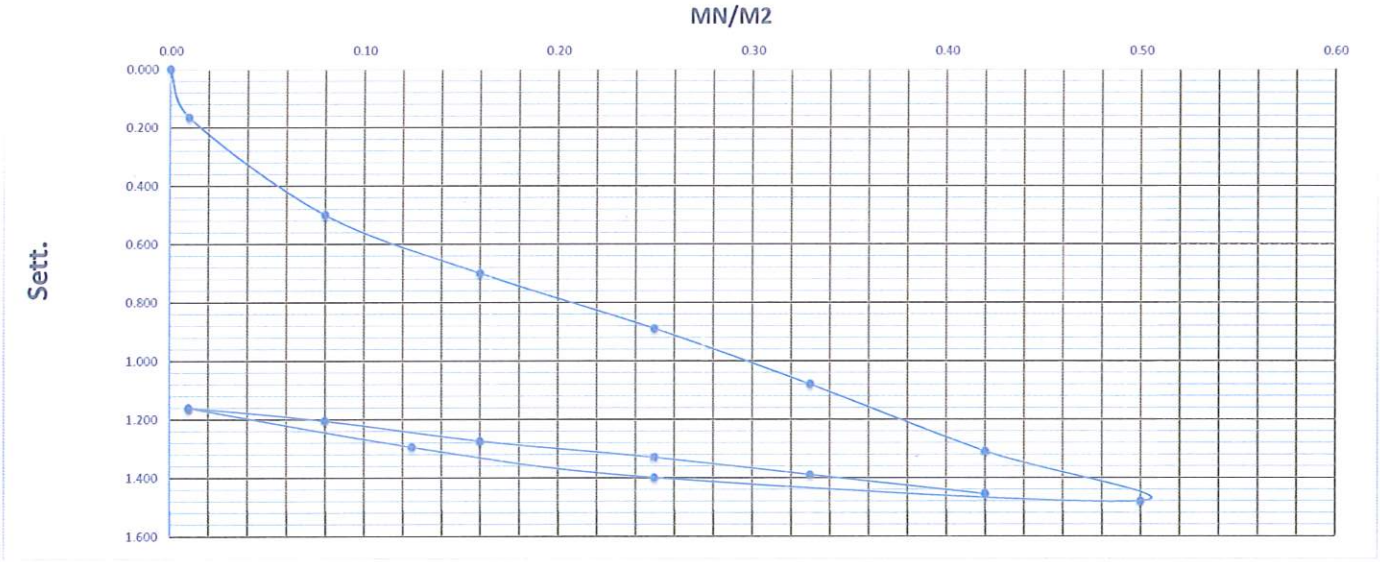
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name :
Sign :	Sign :	Sign : 2023 As

المعمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contarctor | Owner

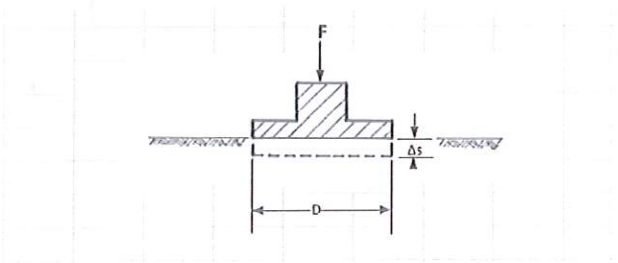
Plate Load Test Results

Company Name	CAIRO COMPANY			
Location	520+500	To	520+700	Station 520+600
Taste Date	8-09-2023			
Layer level	**p.s.g +0.50**			

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.85	19.75		0.150	0.250		0.200
2.000	17.1	5.652	0.08	19.79	19.66		0.210	0.340		0.275
0.080	34.2	11.304	0.16	19.56	19.41		0.440	0.590		0.515
4.000	53.3	17.663	0.25	19.45	19.30		0.550	0.700		0.625
5.000	70.5	23.315	0.33	19.25	19.06		0.750	0.940		0.845
6.000	89.8	29.673	0.42	19.10	18.93		0.900	1.070		0.985
7.000	106.8	35.325	0.50	19.01	18.84		0.990	1.160		1.075
8.000	53.4	17.663	0.25	19.05	18.90		0.950	1.100		1.025
9.000	26.7	8.831	0.12	19.17	19.03		0.830	0.970		0.900
9.000	2.1	0.707	0.01	19.25	19.12		0.750	0.880		0.815
10.000	2.1	0.707	0.01	19.25	19.12		0.750	0.880		0.815
11.000	17.1	5.652	0.08	19.23	19.10		0.770	0.900		0.835
12.000	34.2	11.304	0.16	19.17	19.02		0.830	0.980		0.905
13.000	53.3	17.663	0.25	19.12	18.95		0.880	1.050		0.965
14.000	70.5	23.315	0.33	19.08	18.92		0.920	1.080		1.000
15.000	89.8	29.673	0.42	19.03	18.85		0.970	1.150		1.060

		s	ΔS	Δσ
0.7 σ_1	0.35	0.90625	0.42125	0.2
0.3 σ_1	0.15	0.485		
0.7σ_2	0.35	1.01333	0.15833	0.2
0.3σ_2	0.15	0.855		
D (mm)	300			
Ev_1	106.82			
Ev_2	284.21			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.66		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

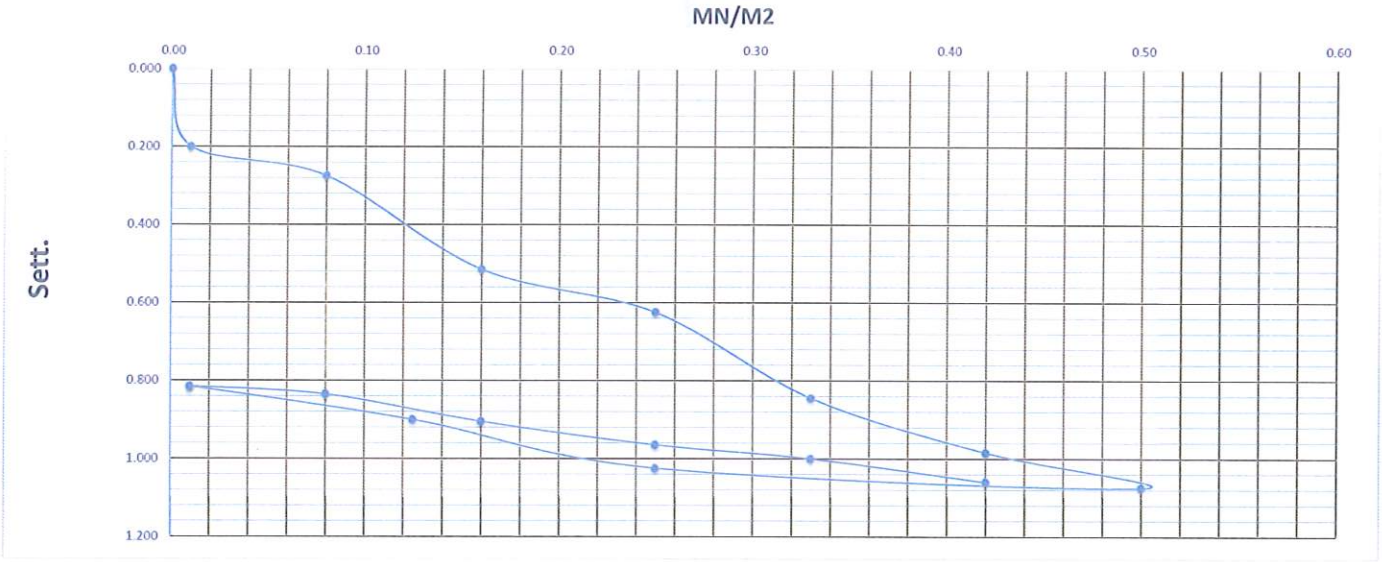
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name :
Sign :	Sign :	Sign : 9/2/2023

المعمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contarctor | Owner

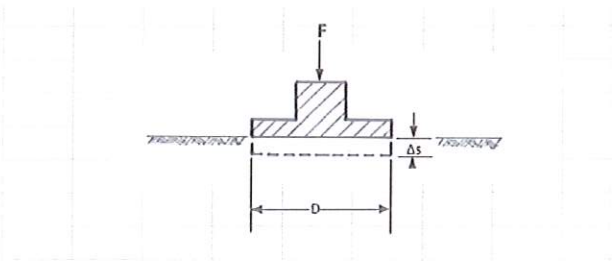
Plate Load Test Results

Company Name	CAIRO COMPANY				
Location	520+500	To	520+700	Station	520+625
Taste Date	8-09-2023				
Layer level	**p.s.g +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.99	19.91		0.010	0.090		0.050
2.000	17.1	5.652	0.08	19.87	19.60		0.130	0.400		0.265
0.080	34.2	11.304	0.16	19.74	19.20		0.260	0.800		0.530
4.000	53.3	17.663	0.25	19.42	19.19		0.580	0.810		0.695
5.000	70.5	23.315	0.33	19.30	18.91		0.700	1.090		0.895
6.000	89.8	29.673	0.42	19.10	18.60		0.900	1.400		1.150
7.000	106.8	35.325	0.50	18.95	18.40		1.050	1.600		1.325
8.000	53.4	17.663	0.25	19.02	18.48		0.980	1.520		1.250
9.000	26.7	8.831	0.12	19.05	18.64		0.950	1.360		1.155
9.000	2.1	0.707	0.01	19.15	18.88		0.850	1.120		0.985
10.000	2.1	0.707	0.01	19.15	18.88		0.850	1.120		0.985
11.000	17.1	5.652	0.08	19.12	18.80		0.880	1.200		1.040
12.000	34.2	11.304	0.16	19.08	18.70		0.920	1.300		1.110
13.000	53.3	17.663	0.25	19.02	18.58		0.980	1.420		1.200
14.000	70.5	23.315	0.33	18.98	18.50		1.020	1.500		1.260
15.000	89.8	29.673	0.42	18.92	18.48		1.080	1.520		1.300

		s	ΔS	Δσ
0.7 σ_1	0.35	0.99687	0.5	0.2
0.3 σ_1	0.15	0.49688		
0.7σ_2	0.35	1.26889	0.17388	0.2
0.3σ_2	0.15	1.09501		
D (mm)	300			
Ev_1	90.00			
Ev_2	258.79			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.88		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

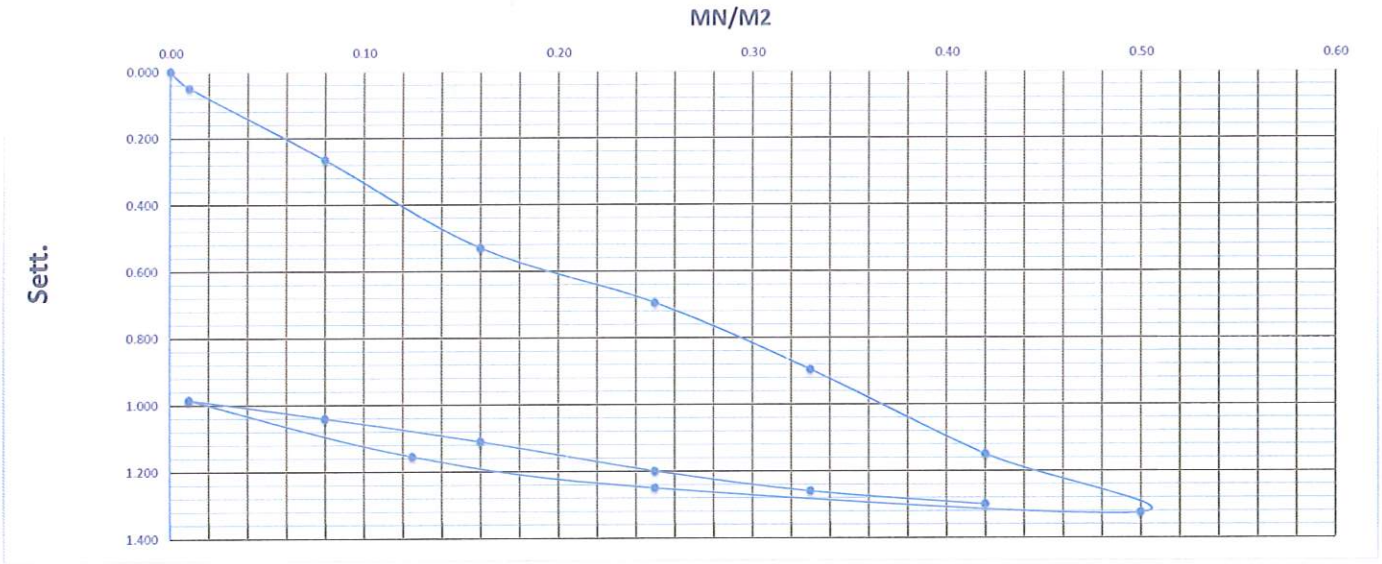
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name :
Sign :	Sign :	Sign :

المعمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contarctor | Owner

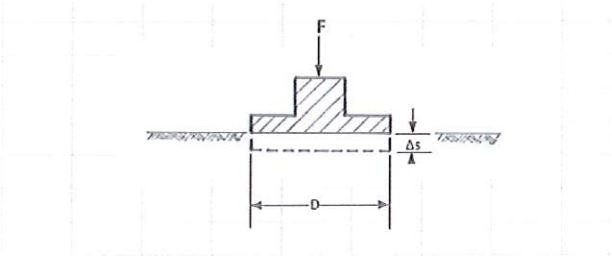
Plate Load Test Results

Company Name	CAIRO COMPANY			
Location	520+500	To	520+700	Station 520+650
Taste Date	8-09-2023			
Layer level	**p.s.g +0.50**			

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.74	19.90		0.260	0.100		0.180
2.000	17.1	5.652	0.08	19.22	19.25		0.780	0.750		0.765
0.080	34.2	11.304	0.16	18.80	19.03		1.200	0.970		1.085
4.000	53.3	17.663	0.25	18.55	18.80		1.450	1.200		1.325
5.000	70.5	23.315	0.33	18.32	18.64		1.680	1.360		1.520
6.000	89.8	29.673	0.42	18.19	18.35		1.810	1.650		1.730
7.000	106.8	35.325	0.50	18.00	18.20		2.000	1.800		1.900
8.000	53.4	17.663	0.25	18.11	18.40		1.890	1.600		1.745
9.000	26.7	8.831	0.12	18.19	18.50		1.810	1.500		1.655
9.000	2.1	0.707	0.01	18.30	18.75		1.700	1.250		1.475
10.000	2.1	0.707	0.01	18.30	18.75		1.700	1.250		1.475
11.000	17.1	5.652	0.08	18.25	18.71		1.750	1.290		1.520
12.000	34.2	11.304	0.16	18.21	18.66		1.790	1.340		1.565
13.000	53.3	17.663	0.25	18.18	18.58		1.820	1.420		1.620
14.000	70.5	23.315	0.33	18.15	18.45		1.850	1.550		1.700
15.000	89.8	29.673	0.42	18.08	18.25		1.920	1.750		1.835

		s	ΔS	Δσ
0.7 σ_1	0.35	1.58125	0.53625	0.2
0.3 σ_1	0.15	1.045		
0.7σ_2	0.35	1.73	0.165	0.2
0.3σ_2	0.15	1.565		
D (mm)	300			
Ev_1	83.92			
Ev_2	272.73			
Area (Sq.m)	0.07065			

Ev2/Ev1	3.25		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

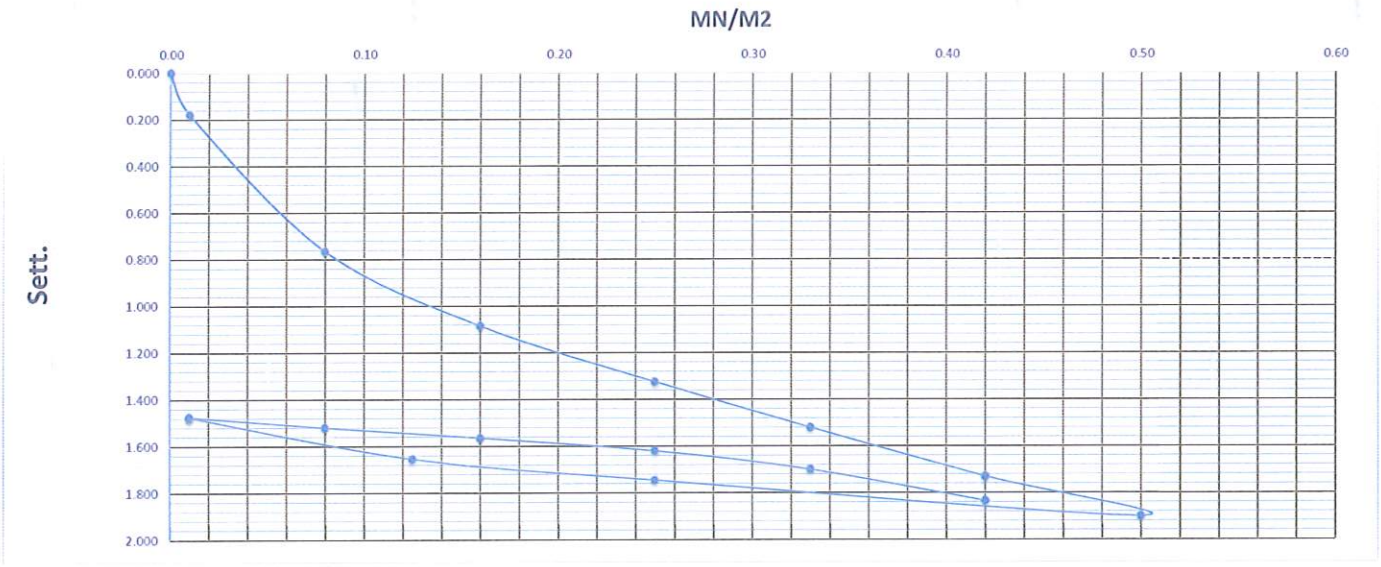
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name :
Sign :	Sign :	Sign : 9/9/2023 AS

المعمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contarctor | Owner

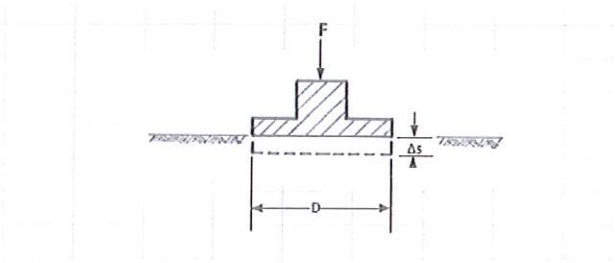
Plate Load Test Results

Company Name	CAIRO COMPANY				
Location	520+500	To	520+700	Station	520+675
Taste Date	8-09-2023				
Layer level	**p.s.g +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.93	19.95		0.070	0.050		0.060
2.000	17.1	5.652	0.08	19.81	19.86		0.190	0.140		0.165
0.080	34.2	11.304	0.16	19.72	19.64		0.280	0.360		0.320
4.000	53.3	17.663	0.25	19.55	19.33		0.450	0.670		0.560
5.000	70.5	23.315	0.33	19.43	19.05		0.570	0.950		0.760
6.000	89.8	29.673	0.42	19.31	18.81		0.690	1.190		0.940
7.000	106.8	35.325	0.50	19.22	18.58		0.780	1.420		1.100
8.000	53.4	17.663	0.25	19.30	18.65		0.700	1.350		1.025
9.000	26.7	8.831	0.12	19.33	18.83		0.670	1.170		0.920
9.000	2.1	0.707	0.01	19.49	19.06		0.510	0.940		0.725
10.000	2.1	0.707	0.01	19.49	19.06		0.510	0.940		0.725
11.000	17.1	5.652	0.08	19.43	19.02		0.570	0.980		0.775
12.000	34.2	11.304	0.16	19.38	18.92		0.620	1.080		0.850
13.000	53.3	17.663	0.25	19.31	18.81		0.690	1.190		0.940
14.000	70.5	23.315	0.33	19.26	18.72		0.740	1.280		1.010
15.000	89.8	29.673	0.42	19.22	18.67		0.780	1.330		1.055

		s	ΔS	Δσ
0.7 σ_1	0.35	0.8	0.49938	0.2
0.3 σ_1	0.15	0.30063		
0.7σ_2	0.35	1.02	0.19499	0.2
0.3σ_2	0.15	0.82501		
D (mm)	300			
Ev_1	90.11			
Ev_2	230.78			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.56		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

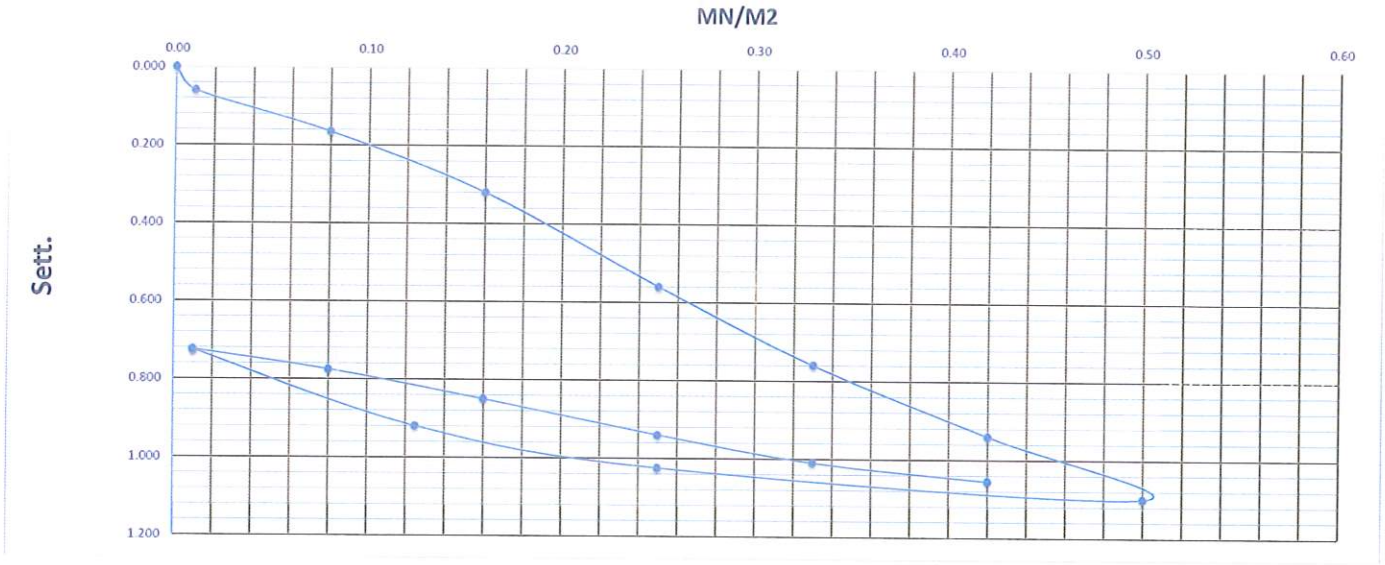
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan AS
Sign :	Sign :	Sign : 2023

المعمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

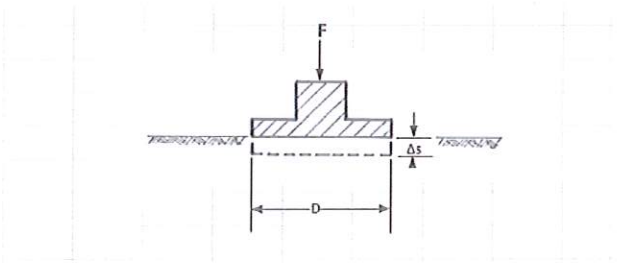
Company Name	CAIRO COMPANY			
Location	520+500	To	520+700	
Taste Date	8-09-2023			
Layer level	**p.s.g +0.50**			

Station	520+700

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.88		0.050	0.120		0.085
2.000	17.1	5.652	0.08	19.60	19.40		0.400	0.600		0.500
0.080	34.2	11.304	0.16	19.25	19.10		0.750	0.900		0.825
4.000	53.3	17.663	0.25	19.03	18.75		0.970	1.250		1.110
5.000	70.5	23.315	0.33	18.78	18.55		1.220	1.450		1.335
6.000	89.8	29.673	0.42	18.55	18.48		1.450	1.520		1.485
7.000	106.8	35.325	0.50	18.40	18.28		1.600	1.720		1.660
8.000	53.4	17.663	0.25	18.50	18.35		1.500	1.650		1.575
9.000	26.7	8.831	0.12	18.55	18.46		1.450	1.540		1.495
9.000	2.1	0.707	0.01	18.70	18.71		1.300	1.290		1.295
10.000	2.1	0.707	0.01	18.70	18.71		1.300	1.290		1.295
11.000	17.1	5.652	0.08	18.65	18.68		1.350	1.320		1.335
12.000	34.2	11.304	0.16	18.60	18.53		1.400	1.470		1.435
13.000	53.3	17.663	0.25	18.55	18.46		1.450	1.540		1.495
14.000	70.5	23.315	0.33	18.52	18.38		1.480	1.620		1.550
15.000	89.8	29.673	0.42	18.49	18.31		1.510	1.690		1.600

		s	ΔS	Δσ
0.7 σ_1	0.35	1.33188	0.5475	0.2
0.3 σ_1	0.15	0.78437		
0.7σ_2	0.35	1.56111	0.18611	0.2
0.3σ_2	0.15	1.375		
D (mm)	300			
Ev_1	82.19			
Ev_2	241.80			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.94		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

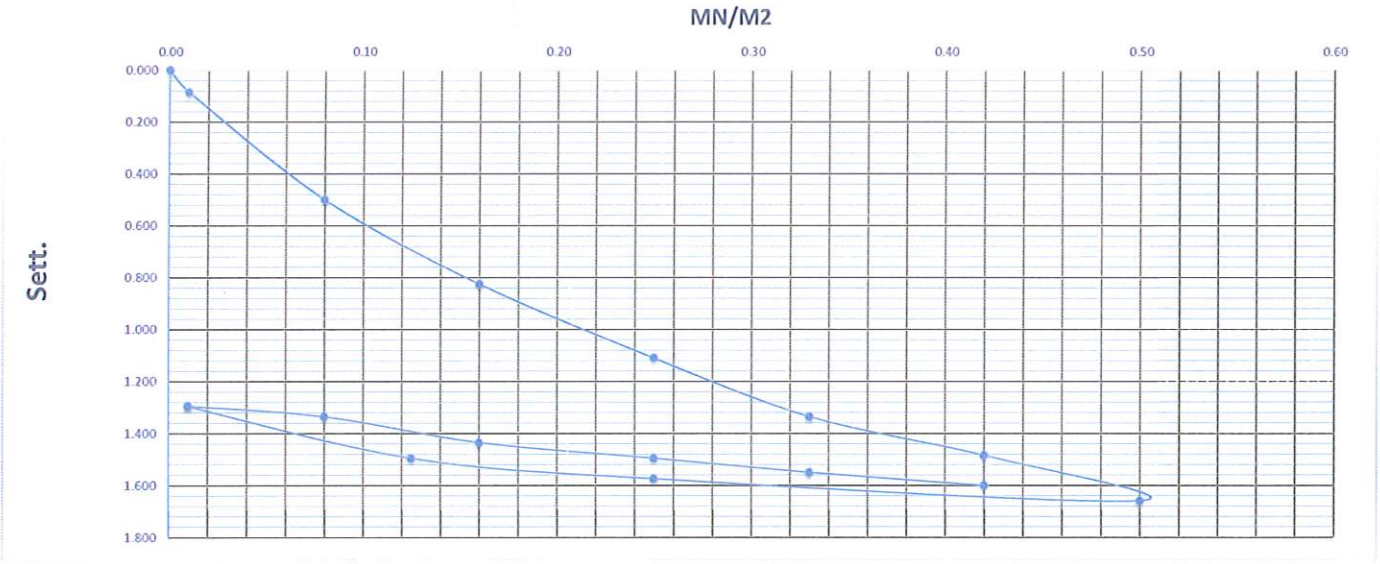
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : As
Sign :	Sign :	Sign : 2023

المعمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

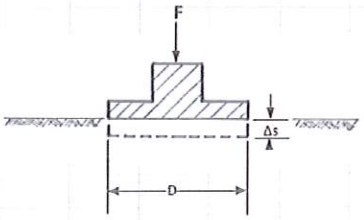
Company Name	CAIRO COMPANY		
Location	520+700	To	520+900
Taste Date	8-09-2023		
Layer level	**p.s.g +0.50**		

Station	520+725

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.98	19.96		0.020	0.040		0.030
2.000	17.1	5.652	0.08	19.74	19.48		0.260	0.520		0.390
0.080	34.2	11.304	0.16	19.17	19.30		0.830	0.700		0.765
4.000	53.3	17.663	0.25	18.81	19.05		1.190	0.950		1.070
5.000	70.5	23.315	0.33	18.60	18.92		1.400	1.080		1.240
6.000	89.8	29.673	0.42	18.42	18.80		1.580	1.200		1.390
7.000	106.8	35.325	0.50	18.27	18.68		1.730	1.320		1.525
8.000	53.4	17.663	0.25	18.31	18.80		1.690	1.200		1.445
9.000	26.7	8.831	0.12	18.37	18.88		1.630	1.120		1.375
9.000	2.1	0.707	0.01	18.50	19.08		1.500	0.920		1.210
10.000	2.1	0.707	0.01	18.50	19.08		1.500	0.920		1.210
11.000	17.1	5.652	0.08	18.48	19.04		1.520	0.960		1.240
12.000	34.2	11.304	0.16	18.42	18.95		1.580	1.050		1.315
13.000	53.3	17.663	0.25	18.35	18.86		1.650	1.140		1.395
14.000	70.5	23.315	0.33	18.29	18.81		1.710	1.190		1.450
15.000	89.8	29.673	0.42	18.27	18.74		1.730	1.260		1.495

		s	ΔS	Δσ
0.7 σ_1	0.35	1.27188	0.55375	0.2
0.3 σ_1	0.15	0.71812		
0.7σ_2	0.35	1.46	0.19	0.2
0.3σ_2	0.15	1.27		
D (mm)	300			
Ev_1	81.26			
Ev_2	236.85			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.91		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

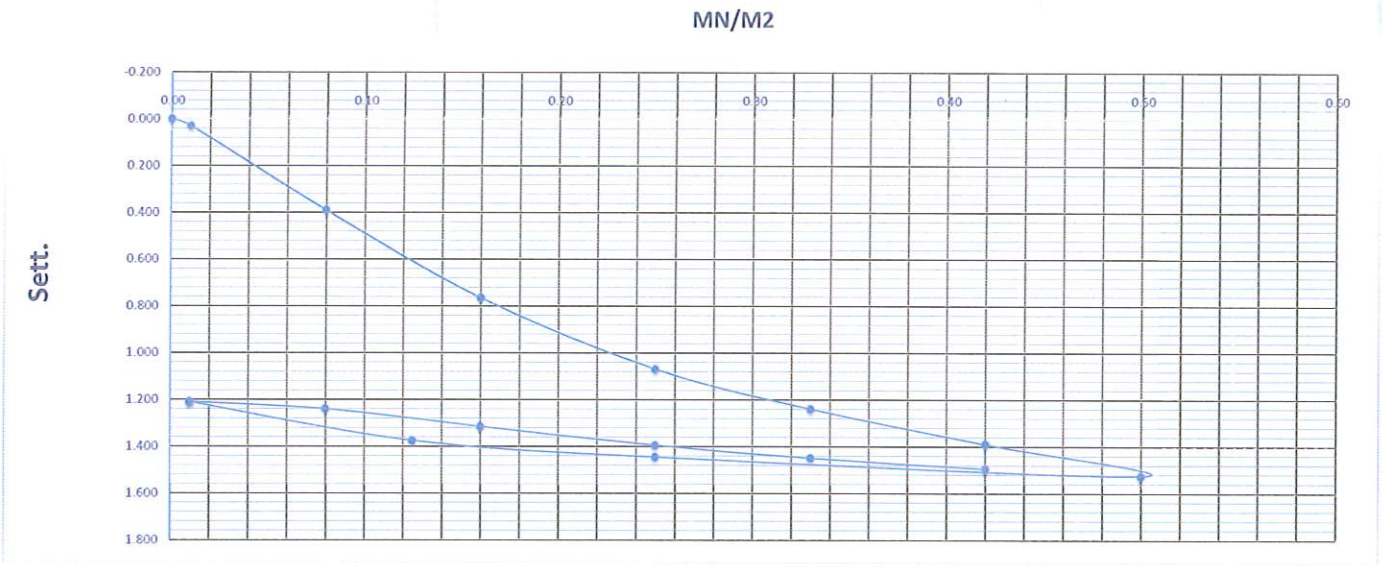
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name :
Sign :	Sign :	Sign : 2023

المعمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contarctor | Owner

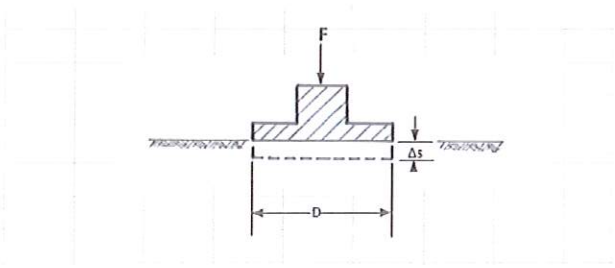
Plate Load Test Results

Company Name	CAIRO COMPANY				
Location	520+700	To	520+900	Station	520+775
Taste Date	8-09-2023				
Layer level	**p.s.g +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.80	19.82		0.200	0.180		0.190
2.000	17.1	5.652	0.08	19.69	19.70		0.310	0.300		0.305
0.080	34.2	11.304	0.16	19.61	19.61		0.390	0.390		0.390
4.000	53.3	17.663	0.25	19.47	19.46		0.530	0.540		0.535
5.000	70.5	23.315	0.33	19.35	19.34		0.650	0.660		0.655
6.000	89.8	29.673	0.42	19.20	19.20		0.800	0.800		0.800
7.000	106.8	35.325	0.50	19.12	19.11		0.880	0.890		0.885
8.000	53.4	17.663	0.25	19.17	19.15		0.830	0.850		0.840
9.000	26.7	8.831	0.12	19.30	19.25		0.700	0.750		0.725
9.000	2.1	0.707	0.01	19.40	19.35		0.600	0.650		0.625
10.000	2.1	0.707	0.01	19.40	19.35		0.600	0.650		0.625
11.000	17.1	5.652	0.08	19.37	19.31		0.630	0.690		0.660
12.000	34.2	11.304	0.16	19.34	19.30		0.660	0.700		0.680
13.000	53.3	17.663	0.25	19.26	19.25		0.740	0.750		0.745
14.000	70.5	23.315	0.33	19.19	19.19		0.810	0.810		0.810
15.000	89.8	29.673	0.42	19.14	19.15		0.860	0.850		0.855

		s	ΔS	Δσ
0.7 σ_1	0.35	0.72563	0.34625	0.2
0.3 σ_1	0.15	0.37938		
0.7σ_2	0.35	0.82	0.125	0.2
0.3σ_2	0.15	0.695		
D (mm)	300			
Ev_1	129.96			
Ev_2	360.01			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.77		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

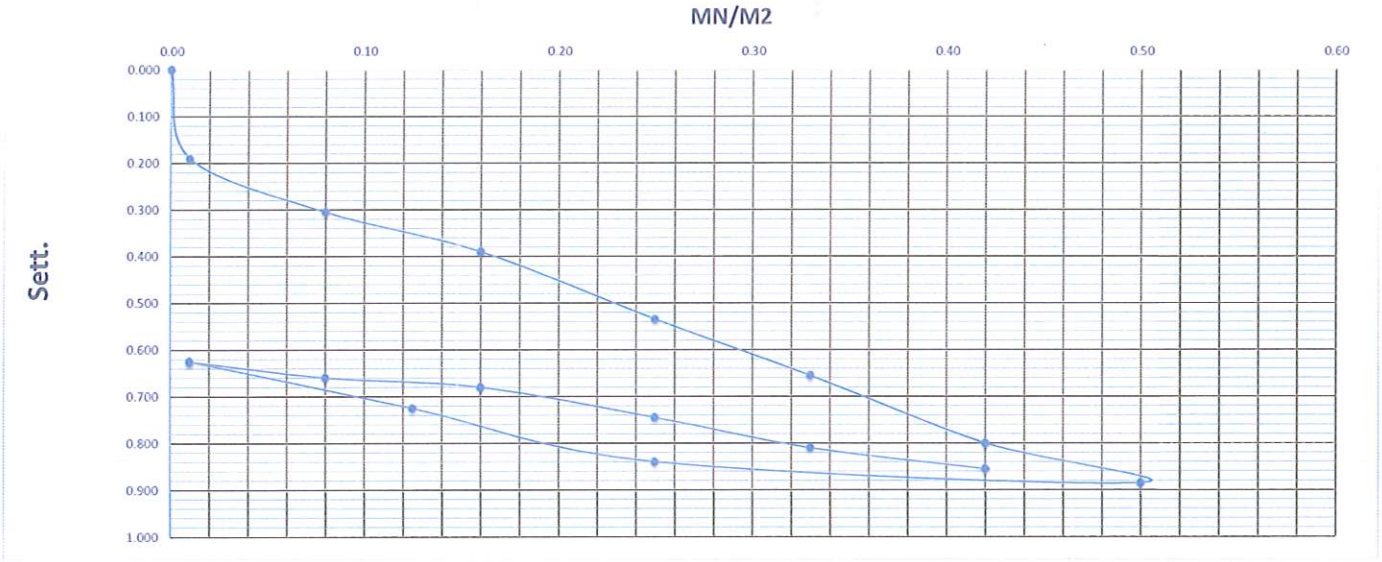
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan AS
Sign :	Sign :	Sign : 9/9/2023

المعمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contarctor | Owner

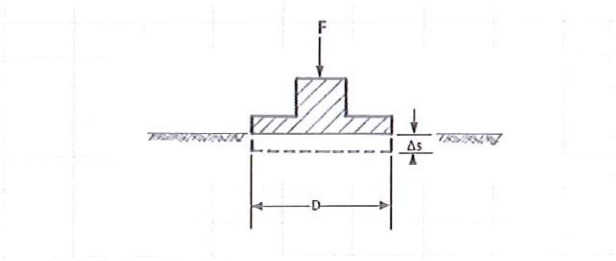
Plate Load Test Results

Company Name	CAIRO COMPANY				
Location	520+700	To	520+900	Station	520+800
Taste Date	8-09-2023				
Layer level	**p.s.g +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.98	19.99		0.020	0.010		0.015
2.000	17.1	5.652	0.08	19.92	19.93		0.080	0.070		0.075
0.080	34.2	11.304	0.16	19.75	19.79		0.250	0.210		0.230
4.000	53.3	17.663	0.25	19.55	19.66		0.450	0.340		0.395
5.000	70.5	23.315	0.33	19.41	19.52		0.590	0.480		0.535
6.000	89.8	29.673	0.42	19.30	19.42		0.700	0.580		0.640
7.000	106.8	35.325	0.50	19.18	19.31		0.820	0.690		0.755
8.000	53.4	17.663	0.25	19.24	19.39		0.760	0.610		0.685
9.000	26.7	8.831	0.12	19.31	19.44		0.690	0.560		0.625
9.000	2.1	0.707	0.01	19.41	19.53		0.590	0.470		0.530
10.000	2.1	0.707	0.01	19.41	19.53		0.590	0.470		0.530
11.000	17.1	5.652	0.08	19.39	19.50		0.610	0.500		0.555
12.000	34.2	11.304	0.16	19.34	19.47		0.660	0.530		0.595
13.000	53.3	17.663	0.25	19.29	19.42		0.710	0.580		0.645
14.000	70.5	23.315	0.33	19.24	19.40		0.760	0.600		0.680
15.000	89.8	29.673	0.42	19.18	19.35		0.820	0.650		0.735

		s	ΔS	Δσ
0.7 σ_1	0.35	0.53937	0.32875	0.2
0.3 σ_1	0.15	0.21063		
0.7σ_2	0.35	0.69222	0.11222	0.2
0.3σ_2	0.15	0.58		
D (mm)	300			
Ev_1	136.88			
Ev_2	401.00			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.93		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

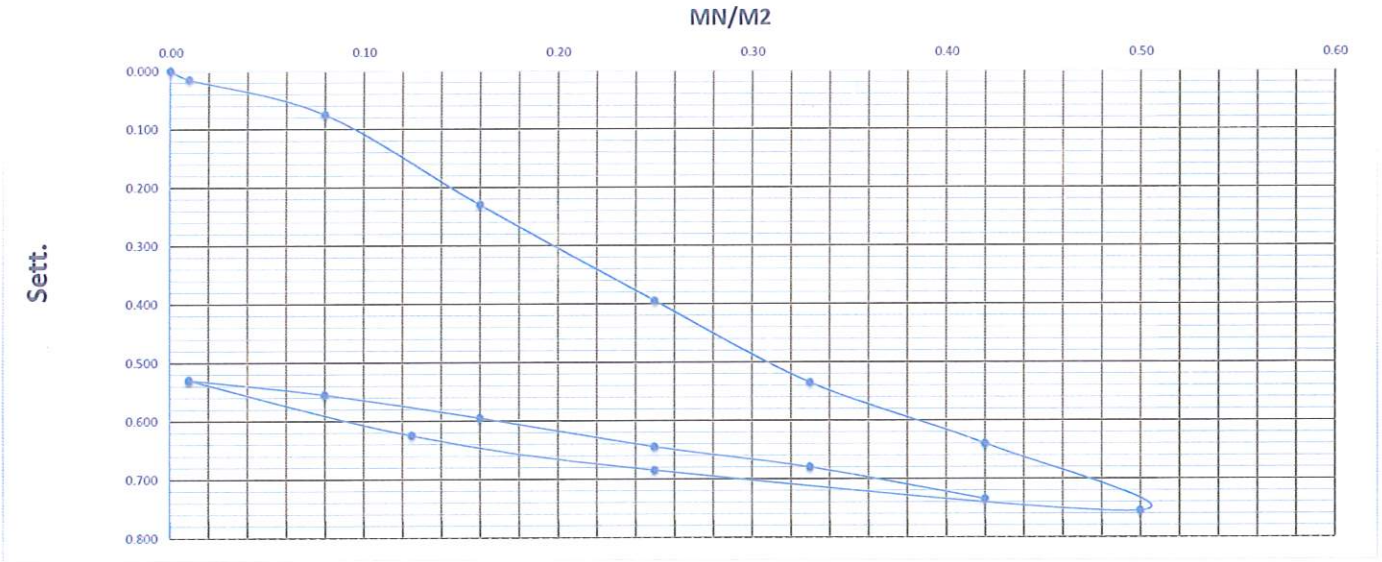
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassa AS
Sign :	Sign :	Sign : 9/2/2023

المعمل المركزى رقم (١)

Owner Consultant | Contractor Consultant | Contarctor | Owner

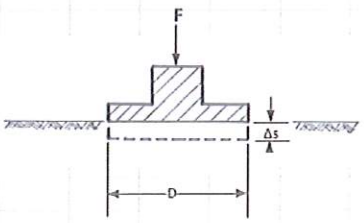
Plate Load Test Results

Company Name	CAIRO COMPANY				
Location	520+700	To	520+900	Station	520+825
Taste Date	8-09-2023				
Layer level	**p.s.g +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.95		0.050	0.050		0.050
2.000	17.1	5.652	0.08	19.72	19.90		0.280	0.100		0.190
0.080	34.2	11.304	0.16	19.38	19.71		0.620	0.290		0.455
4.000	53.3	17.663	0.25	19.05	19.54		0.950	0.460		0.705
5.000	70.5	23.315	0.33	18.75	19.38		1.250	0.620		0.935
6.000	89.8	29.673	0.42	18.55	19.25		1.450	0.750		1.100
7.000	106.8	35.325	0.50	18.39	19.09		1.610	0.910		1.260
8.000	53.4	17.663	0.25	18.45	19.14		1.550	0.860		1.205
9.000	26.7	8.831	0.12	18.55	19.20		1.450	0.800		1.125
9.000	2.1	0.707	0.01	18.79	19.33		1.210	0.670		0.940
10.000	2.1	0.707	0.01	18.79	19.33		1.210	0.670		0.940
11.000	17.1	5.652	0.08	18.78	19.30		1.220	0.700		0.960
12.000	34.2	11.304	0.16	18.62	19.25		1.380	0.750		1.065
13.000	53.3	17.663	0.25	18.50	19.19		1.500	0.810		1.155
14.000	70.5	23.315	0.33	18.43	19.15		1.570	0.850		1.210
15.000	89.8	29.673	0.42	18.38	19.10		1.620	0.900		1.260

		s	ΔS	Δσ
0.7 σ_1	0.35	0.96	0.53812	0.2
0.3 σ_1	0.15	0.42188		
0.7σ_2	0.35	1.22111	0.24111	0.2
0.3σ_2	0.15	0.98		
D (mm)	300			
Ev_1	83.62			
Ev_2	186.64			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.23		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

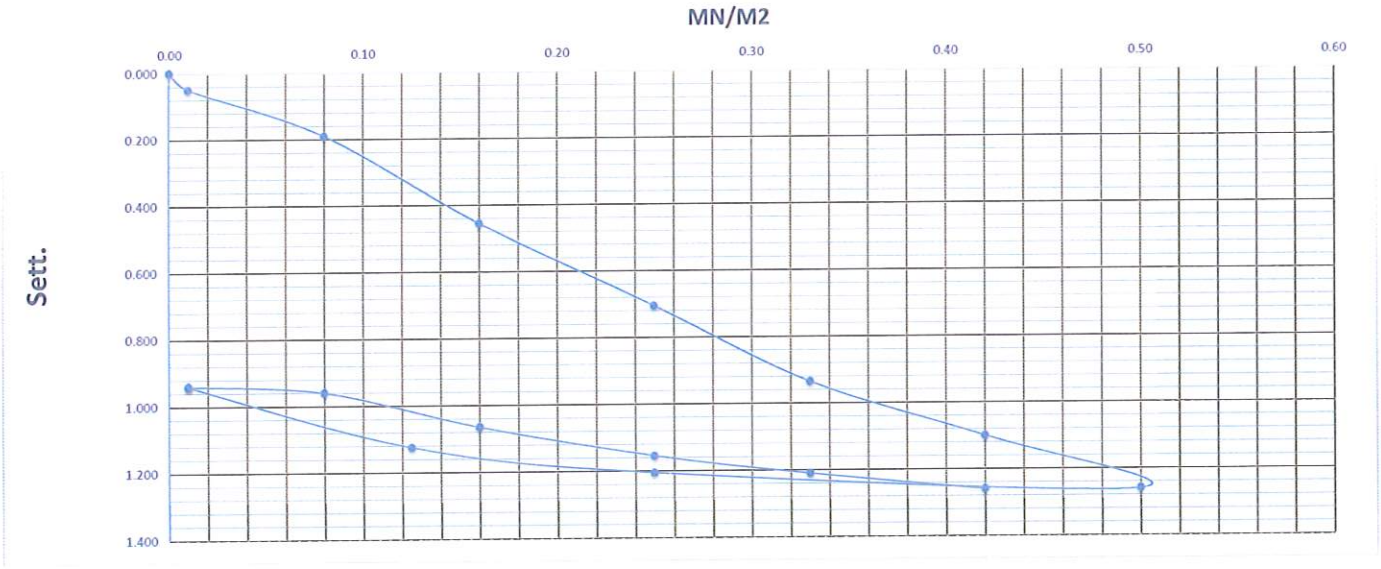
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan AS
Sign :	Sign :	Sign : 9/2/2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

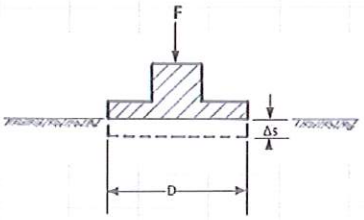
Plate Load Test Results

Company Name	CAIRO COMPANY				
Location	520+700	To	520+900	Station	520+850
Taste Date	8-09-2023				
Layer level	**p.s.g +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.84	19.90		0.160	0.100		0.130
2.000	17.1	5.652	0.08	19.70	19.79		0.300	0.210		0.255
0.080	34.2	11.304	0.16	19.20	19.59		0.800	0.410		0.605
4.000	53.3	17.663	0.25	19.07	19.41		0.930	0.590		0.760
5.000	70.5	23.315	0.33	18.85	19.24		1.150	0.760		0.955
6.000	89.8	29.673	0.42	18.68	19.18		1.320	0.820		1.070
7.000	106.8	35.325	0.50	18.55	18.99		1.450	1.010		1.230
8.000	53.4	17.663	0.25	18.60	19.03		1.400	0.970		1.185
9.000	26.7	8.831	0.12	18.70	19.07		1.300	0.930		1.115
9.000	2.1	0.707	0.01	18.85	19.14		1.150	0.860		1.005
10.000	2.1	0.707	0.01	18.85	19.14		1.150	0.860		1.005
11.000	17.1	5.652	0.08	18.83	19.10		1.170	0.900		1.035
12.000	34.2	11.304	0.16	18.74	19.09		1.260	0.910		1.085
13.000	53.3	17.663	0.25	18.66	19.07		1.340	0.930		1.135
14.000	70.5	23.315	0.33	18.64	19.03		1.360	0.970		1.165
15.000	89.8	29.673	0.42	18.55	18.99		1.450	1.010		1.230

		s	ΔS	Δσ
0.7 σ_1	0.35	0.93	0.36875	0.2
0.3 σ_1	0.15	0.56125		
0.7σ_2	0.35	1.17944	0.11444	0.2
0.3σ_2	0.15	1.065		
D (mm)	300			
Ev_1	122.03			
Ev_2	393.21			
Area (Sq.m)	0.07065			

Ev2/Ev1	3.22		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

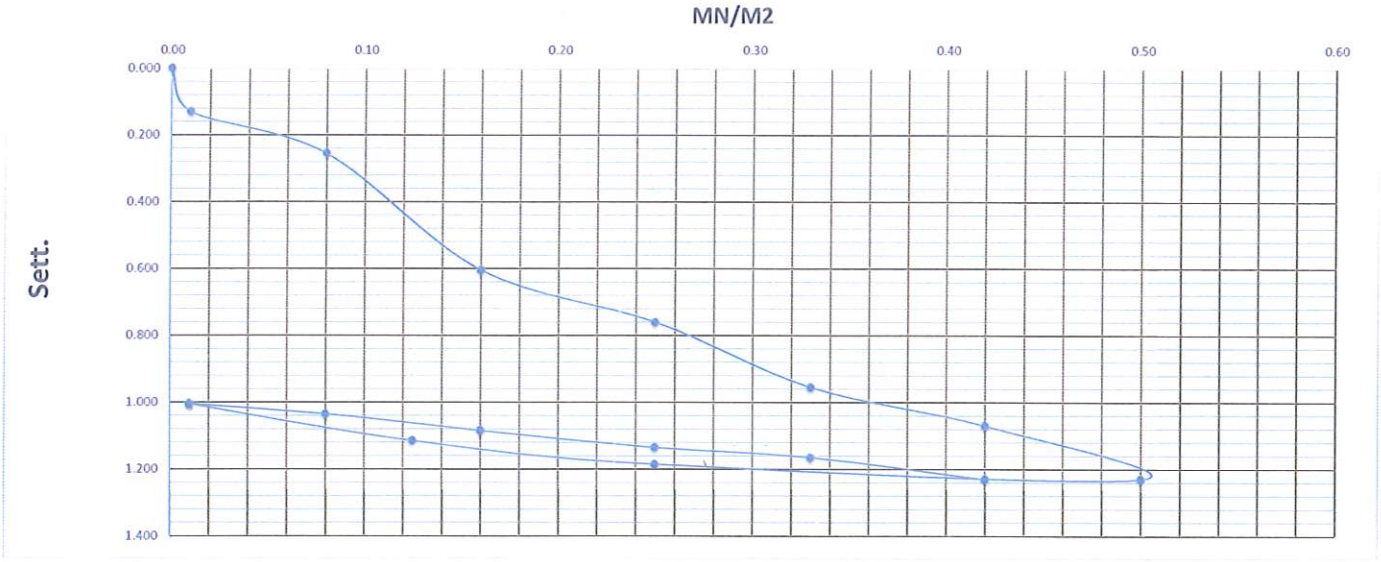
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name :
Sign :	Sign :	Sign : 2023

AS

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

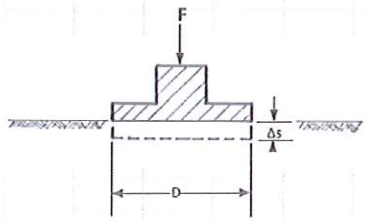
Company Name	CAIRO COMPANY		
Location	520+700	To	520+900
Taste Date	8-09-2023		
Layer level	**p.s.g +0.50**		

Station	520+875

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.90	19.89		0.100	0.110		0.105
2.000	17.1	5.652	0.08	19.40	19.70		0.600	0.300		0.450
0.080	34.2	11.304	0.16	19.10	19.30		0.900	0.700		0.800
4.000	53.3	17.663	0.25	18.92	18.95		1.080	1.050		1.065
5.000	70.5	23.315	0.33	18.73	18.65		1.270	1.350		1.310
6.000	89.8	29.673	0.42	18.42	18.53		1.580	1.470		1.525
7.000	106.8	35.325	0.50	18.22	18.18		1.780	1.820		1.800
8.000	53.4	17.663	0.25	18.30	18.29		1.700	1.710		1.705
9.000	26.7	8.831	0.12	18.39	18.35		1.610	1.650		1.630
9.000	2.1	0.707	0.01	18.51	18.49		1.490	1.510		1.500
10.000	2.1	0.707	0.01	18.51	18.49		1.490	1.510		1.500
11.000	17.1	5.652	0.08	18.50	18.46		1.500	1.540		1.520
12.000	34.2	11.304	0.16	18.45	18.40		1.550	1.600		1.575
13.000	53.3	17.663	0.25	18.37	18.35		1.630	1.650		1.640
14.000	70.5	23.315	0.33	18.30	18.31		1.700	1.690		1.695
15.000	89.8	29.673	0.42	18.25	18.22		1.750	1.780		1.765

		s	ΔS	Δσ
0.7 σ_1	0.35	1.28438	0.52812	0.2
0.3 σ_1	0.15	0.75625		
0.7σ_2	0.35	1.71056	0.17055	0.2
0.3σ_2	0.15	1.54		
D (mm)	300			
Ev_1	85.21			
Ev_2	263.85			
Area (Sq.m)	0.07065			

Ev2/Ev1	3.10		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

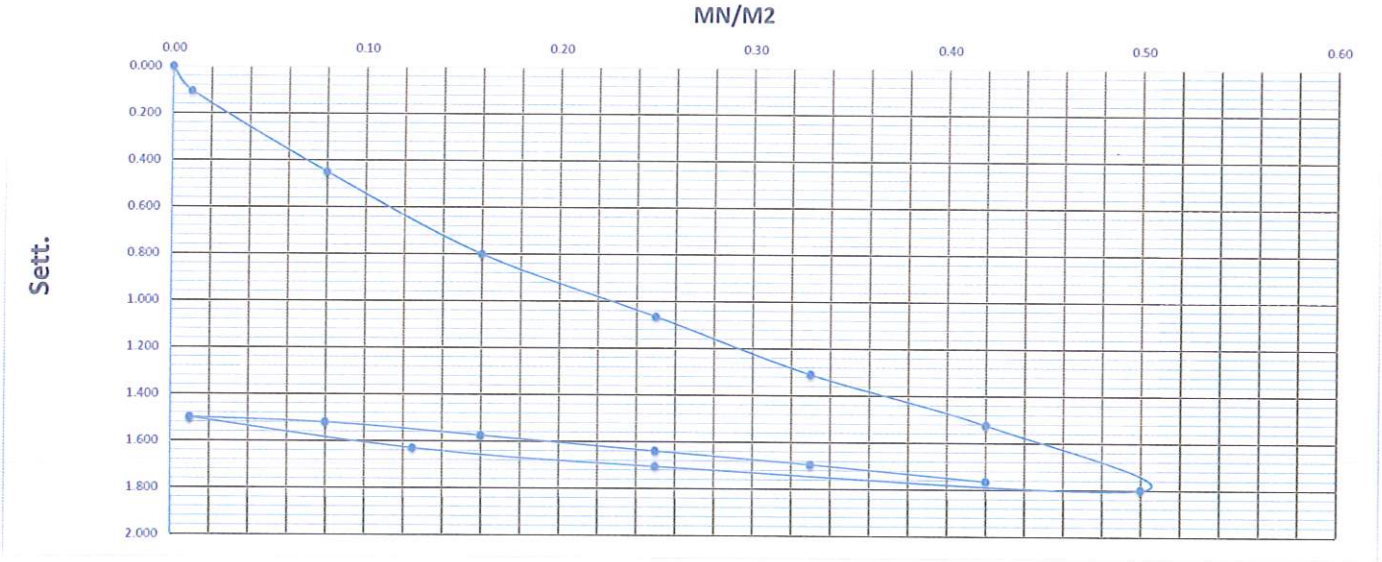
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign :

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

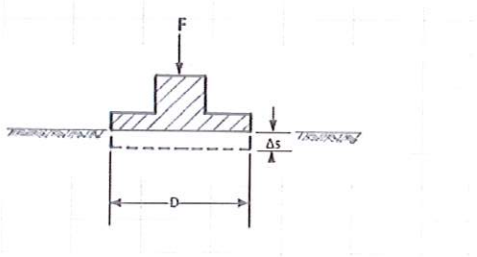
Company Name	CAIRO COMPANY		
Location	520+700	To	520+900
Taste Date	8-09-2023		
Layer level	**p.s.g +0.50**		

Station	520+895

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.89	19.87		0.110	0.130		0.120
2.000	17.1	5.652	0.08	19.38	19.68		0.620	0.320		0.470
0.080	34.2	11.304	0.16	19.08	19.28		0.920	0.720		0.820
4.000	53.3	17.663	0.25	18.90	18.93		1.100	1.070		1.085
5.000	70.5	23.315	0.33	18.71	18.63		1.290	1.370		1.330
6.000	89.8	29.673	0.42	18.40	18.51		1.600	1.490		1.545
7.000	106.8	35.325	0.50	18.20	18.16		1.800	1.840		1.820
8.000	53.4	17.663	0.25	18.28	18.27		1.720	1.730		1.725
9.000	26.7	8.831	0.12	18.37	18.33		1.630	1.670		1.650
9.000	2.1	0.707	0.01	18.49	18.46		1.510	1.540		1.525
10.000	2.1	0.707	0.01	18.49	18.46		1.510	1.540		1.525
11.000	17.1	5.652	0.08	18.48	18.44		1.520	1.560		1.540
12.000	34.2	11.304	0.16	18.43	18.39		1.570	1.610		1.590
13.000	53.3	17.663	0.25	18.35	18.33		1.650	1.670		1.660
14.000	70.5	23.315	0.33	18.28	18.29		1.720	1.710		1.715
15.000	89.8	29.673	0.42	18.23	18.20		1.770	1.800		1.785

		s	ΔS	Δσ
0.7 σ_1	0.35	1.30438	0.52812	0.2
0.3 σ_1	0.15	0.77625		
0.7σ_2	0.35	1.73056	0.17555	0.2
0.3σ_2	0.15	1.555		
D (mm)	300			
Ev_1	85.21			
Ev_2	256.33			
Area (Sq.m)	0.07065			

Ev2/Ev1	3.01		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

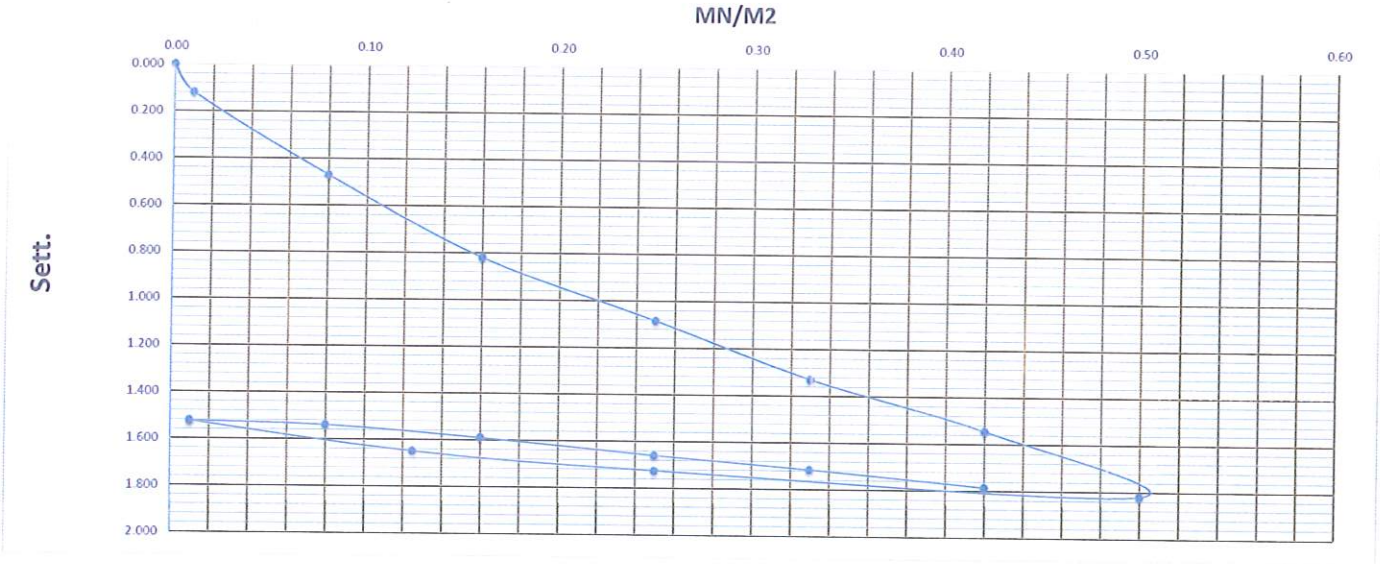
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name :
Sign :	Sign :	Sign : 2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

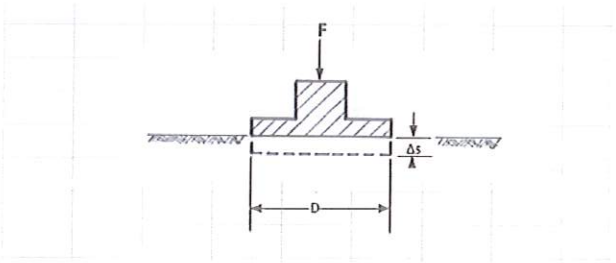
Plate Load Test Results

Company Name	CAIRO COMPANY				
Location	520+700	To	520+900	Station	520+750
Taste Date	8-09-2023				
Layer level	**p.s.g +0.50**				

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett . 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.89		0.050	0.110		0.080
2.000	17.1	5.652	0.08	19.86	19.55		0.140	0.450		0.295
0.080	34.2	11.304	0.16	19.80	19.40		0.200	0.600		0.400
4.000	53.3	17.663	0.25	19.65	19.15		0.350	0.850		0.600
5.000	70.5	23.315	0.33	19.52	18.99		0.480	1.010		0.745
6.000	89.8	29.673	0.42	19.39	18.76		0.610	1.240		0.925
7.000	106.8	35.325	0.50	19.25	18.58		0.750	1.420		1.085
8.000	53.4	17.663	0.25	19.29	18.65		0.710	1.350		1.030
9.000	26.7	8.831	0.12	19.36	18.75		0.640	1.250		0.945
9.000	2.1	0.707	0.01	19.45	18.90		0.550	1.100		0.825
10.000	2.1	0.707	0.01	19.45	18.90		0.550	1.100		0.825
11.000	17.1	5.652	0.08	19.43	18.89		0.570	1.110		0.840
12.000	34.2	11.304	0.16	19.39	18.82		0.610	1.180		0.895
13.000	53.3	17.663	0.25	19.32	18.70		0.680	1.300		0.990
14.000	70.5	23.315	0.33	19.29	18.67		0.710	1.330		1.020
15.000	89.8	29.673	0.42	19.25	18.59		0.750	1.410		1.080

		s	ΔS	Δσ
0.7 σ_1	0.35	0.785	0.39812	0.2
0.3 σ_1	0.15	0.38688		
0.7σ_2	0.35	1.03333	0.17833	0.2
0.3σ_2	0.15	0.855		
D (mm)	300			
Ev_1	113.03			
Ev_2	252.34			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.23		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

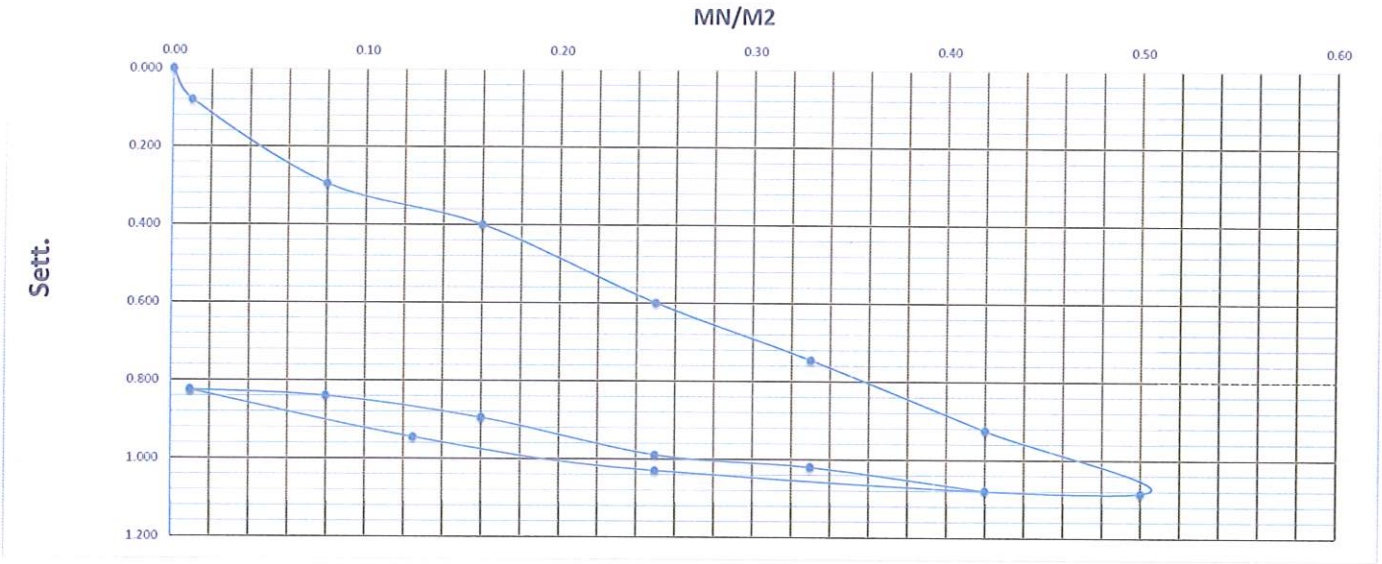
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassa
Sign :	Sign :	Sign : 2023

المعمل المركزى رقم (١)

Contractor Consultant | Contarctor | Owner

Plate Load Test Results

Layer:	PREPARED SUBGRADE 2		0.50+
Station:	520+900	TO	521+000
Date:	24-08-23		

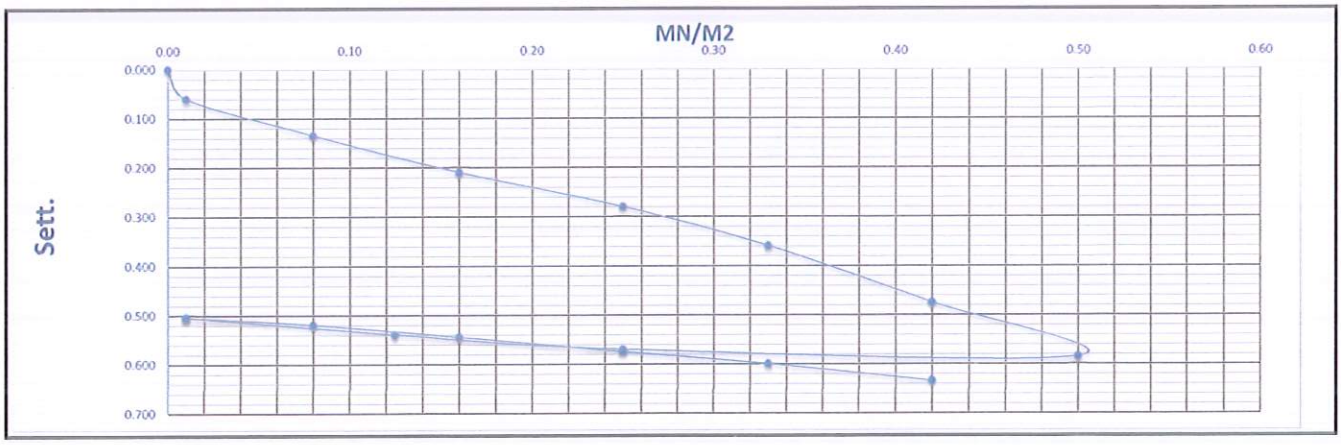
COMPANY	AL QAHRA
Location	520+990

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	8.17	8.63		0.000	0.000		0.000
1.000	1.0	0.707	0.01	8.11	8.57		0.060	0.060		0.060
2.000	7.9	5.652	0.08	8.03	8.50		0.140	0.130		0.135
0.080	15.8	11.304	0.16	7.95	8.43		0.220	0.200		0.210
4.000	24.7	17.663	0.25	7.85	8.39		0.320	0.240		0.280
5.000	32.6	23.315	0.33	7.74	8.34		0.430	0.290		0.360
6.000	41.5	29.673	0.42	7.62	8.23		0.550	0.400		0.475
7.000	49.4	35.325	0.50	7.50	8.13		0.670	0.500		0.585
8.000	24.7	17.663	0.25	7.52	8.14		0.650	0.490		0.570
9.000	12.4	8.831	0.12	7.55	8.17		0.620	0.460		0.540
9.000	1.0	0.707	0.01	7.59	8.20		0.580	0.430		0.505
10.000	1.0	0.707	0.01	7.59	8.20		0.580	0.430		0.505
11.000	7.9	5.652	0.08	7.58	8.18		0.590	0.450		0.520
12.000	15.8	11.304	0.16	7.56	8.15		0.610	0.480		0.545
13.000	24.7	17.663	0.25	7.53	8.12		0.640	0.510		0.575
14.000	32.6	23.315	0.33	7.51	8.09		0.660	0.540		0.600
15.000	41.5	29.673	0.42	7.48	8.05		0.690	0.580		0.635

		s	ΔS	Δσ
0.7 σ_1	0.35	0.37875	0.17813	0.2
0.3 σ_1	0.15	0.20063		
0.7σ_2	0.35	0.60778	0.07278	0.2
0.3σ_2	0.15	0.535		
D (mm)	300			
Ev_1	252.63			
Ev_2	618.33			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.45		

LOAD
UN LOAD
RE LOAD



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Mohamed Hamed	Name : Youssef Rafat
Sign :	Sign :	Sign : Youssef 24/8/2023

المعمل المركزي رقم ٢
القطار السريع - القطاع السابع

Contractor Consultant | Contarctor | Owner

Plate Load Test Results

Layer:	PREPARED SUBGRADE 2		0.50+
Station:	520+900	TO	521+000
Date:	24-08-23		

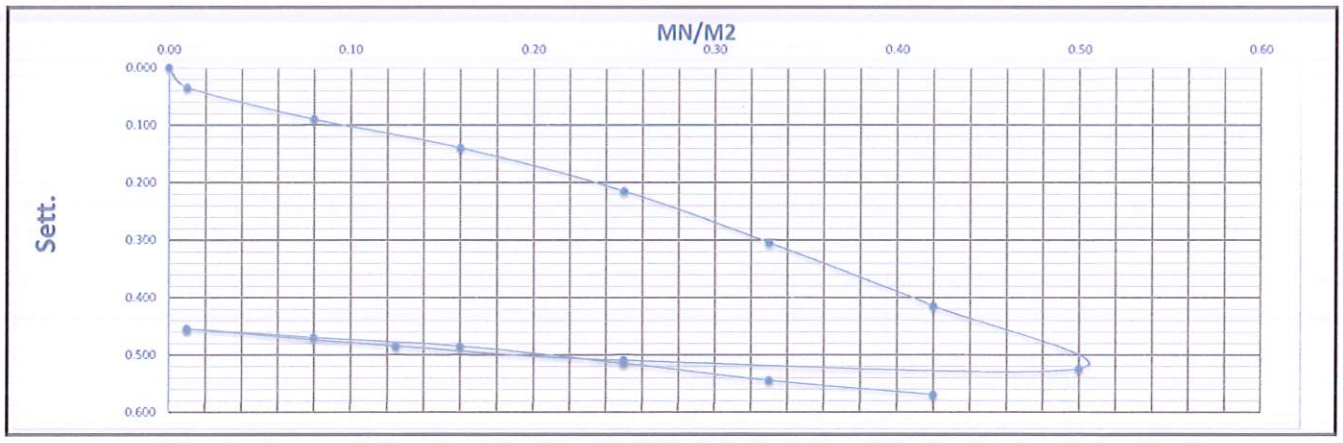
COMPANY	AL QAHRA
Location	520+960

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett . 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	7.81	7.24		0.000	0.000		0.000
1.000	1.0	0.707	0.01	7.78	7.20		0.030	0.040		0.035
2.000	7.9	5.652	0.08	7.71	7.16		0.100	0.080		0.090
0.080	15.8	11.304	0.16	7.66	7.11		0.150	0.130		0.140
4.000	24.7	17.663	0.25	7.58	7.04		0.230	0.200		0.215
5.000	32.6	23.315	0.33	7.48	6.96		0.330	0.280		0.305
6.000	41.5	29.673	0.42	7.36	6.86		0.450	0.380		0.415
7.000	49.4	35.325	0.50	7.25	6.75		0.560	0.490		0.525
8.000	24.7	17.663	0.25	7.26	6.77		0.550	0.470		0.510
9.000	12.4	8.831	0.12	7.28	6.80		0.530	0.440		0.485
9.000	1.0	0.707	0.01	7.31	6.83		0.500	0.410		0.455
10.000	1.0	0.707	0.01	7.31	6.83		0.500	0.410		0.455
11.000	7.9	5.652	0.08	7.30	6.81		0.510	0.430		0.470
12.000	15.8	11.304	0.16	7.28	6.80		0.530	0.440		0.485
13.000	24.7	17.663	0.25	7.25	6.77		0.560	0.470		0.515
14.000	32.6	23.315	0.33	7.21	6.75		0.600	0.490		0.545
15.000	41.5	29.673	0.42	7.19	6.72		0.620	0.520		0.570

		s	ΔS	Δσ
$0.7\ \sigma_1$	0.35	0.31875	0.185	0.2
$0.3\ \sigma_1$	0.15	0.13375		
$0.7\sigma_2$	0.35	0.55056	0.06555	0.2
$0.3\sigma_2$	0.15	0.485		
D (mm)	300			
Ev_1	243.24			
Ev_2	686.46			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.82		

LOAD
UN LOAD
RE LOAD



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Mohamed Hamed	Name : Youssef Ragab
Sign :	Sign :	Sign : Youssef 24/8 2023

القطار السريع - القطاع السابع

Contractor Consultant | Contarctor | Owner

Plate Load Test Results

Layer:	PREPARED SUBGRADE 2		0.50+
Station:	520+900	TO	521+000
Date:	24-08-23		

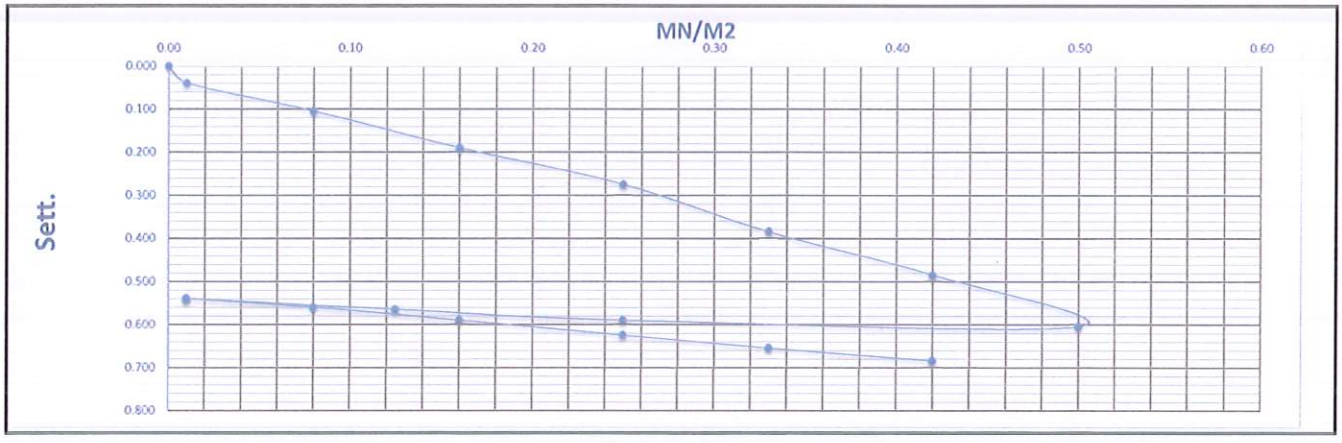
COMPANY	AL QAHRA
Location	520+935

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett . 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	6.98	7.65		0.000	0.000		0.000
1.000	1.0	0.707	0.01	6.95	7.60		0.030	0.050		0.040
2.000	7.9	5.652	0.08	6.89	7.53		0.090	0.120		0.105
0.080	15.8	11.304	0.16	6.80	7.45		0.180	0.200		0.190
4.000	24.7	17.663	0.25	6.71	7.37		0.270	0.280		0.275
5.000	32.6	23.315	0.33	6.59	7.27		0.390	0.380		0.385
6.000	41.5	29.673	0.42	6.47	7.19		0.510	0.460		0.485
7.000	49.4	35.325	0.50	6.35	7.07		0.630	0.580		0.605
8.000	24.7	17.663	0.25	6.37	7.08		0.610	0.570		0.590
9.000	12.4	8.831	0.12	6.40	7.10		0.580	0.550		0.565
9.000	1.0	0.707	0.01	6.42	7.13		0.560	0.520		0.540
10.000	1.0	0.707	0.01	6.42	7.13		0.560	0.520		0.540
11.000	7.9	5.652	0.08	6.40	7.11		0.580	0.540		0.560
12.000	15.8	11.304	0.16	6.37	7.08		0.610	0.570		0.590
13.000	24.7	17.663	0.25	6.34	7.04		0.640	0.610		0.625
14.000	32.6	23.315	0.33	6.31	7.01		0.670	0.640		0.655
15.000	41.5	29.673	0.42	6.28	6.98		0.700	0.670		0.685

		s	ΔS	Δσ
0.7 σ_1	0.35	0.38	0.20063	0.2
0.3 σ_1	0.15	0.17938		
0.7σ_2	0.35	0.66167	0.08166	0.2
0.3σ_2	0.15	0.58		
D (mm)	300			
Ev_1	224.30			
Ev_2	551.03			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.46		

LOAD
UN LOAD
RE LOAD



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Mohamed Hamdy	Name : Youssef Ragab
Sign :	Sign : 24 2023	Sign : Youssef 24/8/23

المعمل المركزي للقطاع السابع
القطار السريع

Contractor Consultant | Contarctor | Owner

Plate Load Test Results

Layer:	PREPARED SUBGRADE 2		0.50+
Station:	520+900	TO	521+000
Date:	24-08-23		

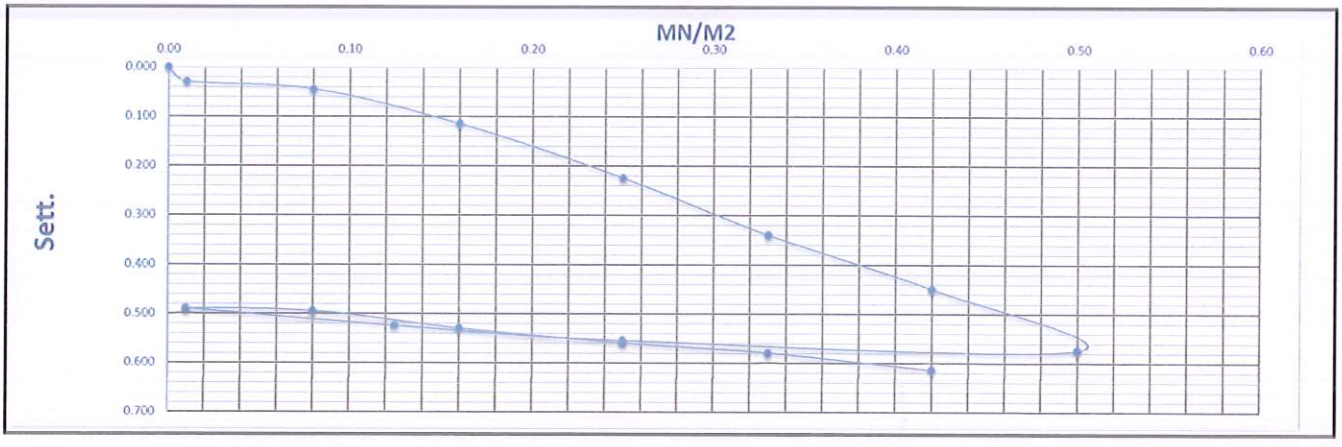
COMPANY	AL QAHRA
Location	520+910

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	7.26	7.77		0.000	0.000		0.000
1.000	1.0	0.707	0.01	7.23	7.74		0.030	0.030		0.030
2.000	7.9	5.652	0.08	7.21	7.73		0.050	0.040		0.045
0.080	15.8	11.304	0.16	7.14	7.66		0.120	0.110		0.115
4.000	24.7	17.663	0.25	7.04	7.54		0.220	0.230		0.225
5.000	32.6	23.315	0.33	6.92	7.43		0.340	0.340		0.340
6.000	41.5	29.673	0.42	6.82	7.31		0.440	0.460		0.450
7.000	49.4	35.325	0.50	6.70	7.18		0.560	0.590		0.575
8.000	24.7	17.663	0.25	6.71	7.21		0.550	0.560		0.555
9.000	12.4	8.831	0.12	6.73	7.25		0.530	0.520		0.525
9.000	1.0	0.707	0.01	6.75	7.30		0.510	0.470		0.490
10.000	1.0	0.707	0.01	6.75	7.30		0.510	0.470		0.490
11.000	7.9	5.652	0.08	6.74	7.30		0.520	0.470		0.495
12.000	15.8	11.304	0.16	6.71	7.26		0.550	0.510		0.530
13.000	24.7	17.663	0.25	6.67	7.24		0.590	0.530		0.560
14.000	32.6	23.315	0.33	6.65	7.22		0.610	0.550		0.580
15.000	41.5	29.673	0.42	6.63	7.17		0.630	0.600		0.615

		s	ΔS	Δσ
0.7 σ_1	0.35	0.34063	0.23438	0.2
0.3 σ_1	0.15	0.10625		
0.7σ_2	0.35	0.58778	0.08778	0.2
0.3σ_2	0.15	0.5		
D (mm)	300			
Ev_1	192.00			
Ev_2	512.66			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.67		

LOAD
UN LOAD
RE LOAD



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Mohamed Hamed	Name : Youssef Ragab
Sign :	Sign :	Sign : Youssef 24/8/2023

المهندس المقيم رقم ٢٨
القطار السريع - القطاع السابع