

المنطقة الخامسة - ( غرب الدلتا)

t

السيد المهندس / رئيس قطاع التنفيذ والمناطق

تحية طيبة. وبعد،،

بالإحالة إلى مشروع القطار الكهربائي السريع قطاع (برج العرب – العلمين ) القطاع الخامس (أ) نتشرف بأن نرفق لسيادتكم طيه المقايسة المعدله بعد اعتماد لجنة المفاوضه للقطاع الأتى:

لمسلسل	اسم الشركـــــة	من المحطة	إلى	بطول
			المحطـة	
1	شركة أورانج للإستيراد و التصدير	345+960	347+460	1.5 كم
	عقد رقم 2024/2023/718			

برجاء من سيادتكم التفضل بالأحاطه والتوجيه بالازم

وتفضلوا بقبول فائق الأحترام والتقدير،،

رتيس الإدارة المركزية

المنطقة الخامسة. غرب الدلتا

عميد مهندس/ ٥ c.c0 C " هاني محمد محمود طه "



				أعمال الردم	٣
			٣٩	بالمتر المكعب اعمال توريد وفرش طبقة فلتر من الأحجار الصلبة المتدرجة ناتج تكسير كسارات والمطابقة للمواصفات واقصي حجم حبيبي ما بين ٢٠ مم الي ٧٥ مم والا يزيد نسبة المار من منخل ٢٠٠ عن ٥% والتدرج الوارد بالاشتراطات الخاصة بالمشروع وهي احجار مقاس سن ١ :سن ٢ :سن ٤ او سن ٦ بنسبة ١:١١ والايقل معامل المرونة EV2 من تجربة لوح التحميل عن ٥٠ ميجابسكال والا يزيد نسبة الفاقد بجهاز لوس انجلوس عن ٥٠ % والفنة تشمل اعمال التجارب المعملية والبند يشمل اجراء التجارب المعملية والحقلية طبقا لاصول الصناعة المممتازة وتقرير الاستشاري وتعليمات المهندس المشرف .	
				<ul> <li>لمسافة نقل ٢٠ كم .</li> <li>الفنة شاملة قيمة المادة المحجرية.</li> <li>يتم احتساب ١,٣ جنية لكل ١ كم بالزيادة أو النقصان .</li> </ul>	۲_۱
7,119,71,	٣٤٧,٢.	11040,.	٣٩	السعر ابتداءً من شهر مايو ٢٠٢٣ طبقاً للمفاوضة بتاريخ ١٨-١٢-٢٠٢	
۲,٤٦٣,٠٤٥	184,2.	14080,.	٣.	علاوة مسافة النقل ١٢٢ كم =١.٣*١٠ = ١٣٢. (٢٠ - ١٢٢ )	
£71,7V0	۲٥,	11040,.	٣٨	علاوة تحصيل رسوم الكارتة والموازين طبقا للانحه الشركة الوطنية	
٩,٣٧٦,٦٦,				الاجمالي	
	J		اً فقط لاغير	تشيع ملايين وثلاثمانة وستة وسبعون ألفأ وستمانة وستون جنيها	

\* يرجى العلم بان الفنات المذكورة طبقًا للمفاوضة الخاصة بالقطاع الخامس (أ) بتاريخ ١٨-١٢-٢٠٢٣.





قائمة الكميات الواردة بالمستخلص جاري (٢)

اسناد أعمال الجسر الترابي للخط الأول من مشروع القطار الكهربائي السريع (برج العرب - العلمين) (أعمال سن الفلتر) المسافة من الكم ٣٤٥,٩٦٠ إلى الكم ٣٤٧,٤٦٠ بطول ١,٥ كم (بالأمر المباشر).

بند (۲-۳):

بالمتر المكعب أعمال توريد وفرش طبقة فلتر من الأحجار الصلبة المتدرجة ناتج تكسير كسارات والمطابقة للمواصفات وأقصى حجم حبيي ما بين ٢٠ مم إلى ٧٥ مم وألا يزيد نسبة المار من منخل ٢٠٠ عن ٥% والتدرج الوارد بالاشتراطات الخاصة بالمشروع وهي أحجار مقاس سن١:سن٢:سن٢ أو سن٦ بنسبة ١:١١ وألا يقل معامل المرونة EV2 من تجربة لوح التحميل عن ٥٠ ميجا بسكال وألا يزيد نسبة الفاقد بجهاز لوس أنجلوس عن ٤٥% والفئة تشمل أعمال التجارب المعملية والبند يشمل اجراء التجارب المعملية والحقلية طبقاً لأصول الصناعة

السعر ابتداءً من شهر مايو ٢٠٢٣ طبقا للمفاوضة الخاصة بالقطاع الخامس (أ) بتاريخ ١٨-١٢-٢٠

#### عقد (۲۰۲٤/۲۰۲۳/۷۱۸) عقد

#### مقدار العمل السابق: ٩٣ •,• الموقع الكيلومتري الكود مسلسل الطول (متر) الكمية (م٣) المسطح (م٢) الى الكم من الكم ١ 727+27. 727+22. IR-FT-004 Rev02 1..2,19 0.,11 ۲. ۲ 727+72. IR-FT-005 1. 199,00 09,77 ۱۸۰ ٣٤7+٨٢. ٣ 727+27. ٤٨,٣٤ ۲. ٣٤٦+٤٨. IR-FT-006 977,10 ۳٤٧+.٨. ٣٤٧+.٣. IR-FT-007 REV02 ٤ ۲۲۸۰,۸٦ 20,75 ٥. اجمالي الكمية الهندسي (٣٣) . 12991,70 اجمالي الكمية بعد احتساب نسبة غرل. ٢% (م٢) 18919.0. الاجمالي خلال فترة المستخلص الحالية (م) 18919,0. مهندس الإستشاري ا.د/خالد قنا XYZC مهندس الهيئة م / مارجريت مجدي I STAR ă

تــنفيــذ : "شركة اورانج للاستيراد والتصدير "



قائمة الكميات الواردة بالمستخلص جاري (٢)

اسناد أعمال الجسر الترابي للخط الأول من مشروع القطار الكهربائي السريع (برج العرب - العلمين) (أعمال سن الفلتر) المسافة من الكم ٣٤٥,٩٦٠ إلى الكم ٣٤٧,٤٦٠ بطول ١,٥ كم (بالأمر المباشر).

علاوة بند (٢-٢) علاوة مسافة النقل ١٢٢ كم .

# عقد (۲۰۲٤/۲۰۲۳/۷۱۸)

# تــنفيــذ : "شركة اورانج للاستيراد والتصدير "

		[	٣٩	۰,۰	مل السابق :	مقدار ال
			لكيلومتري	الموقع ا	الكود	مسلسل
الكمية (٣٥)	المسطح (م٢)	الطول (متر)	الى الكم	من الكم	العود	مستسل
۱۰۰٤,۱۹	0.,71	۲.	٣٤٦+٤٦.	٣٤٦+٤٤٠	IR-FT-004 Rev02	)
1.789,80	09,77	۱۸۰	۳٤٦+٨٢.	۳٤٦+٦٤٠	IR-FT-005	٢
۹٦٦,٨٥	٤٨,٣٤	۲.	٣٤٦+٤٨٠	۳٤٦+٤٦.	IR-FT-006	٣
۲۲۸۰,۸٦	٤٥,٦٢	٥.	۳٤٧+٠٨٠	۳٤٧+۰۳۰	IR-FT-007 REV02	٤
12991,70			دسي (٣٦)	مالي الكمية الهن	-1	
18989,00		1 (	نسبة غرز ٢٠ (م	بة بعد احتساب	اجمالي الكمب	
		1.0	9		(m)	
18979'0.		2. 7 1	نخلص الحالية (م)	خلال فترة المسا	جمالي	

مهندس الاستشاري XYZ بكتب مهندس الشركة -افظ م / مارچريت مجدي / محمد خليل ORANGE PORT&IN 11.14 ig

مهندس الهيئة



قائمة الكميات الواردة بالمستخلص جاري (٢)

La liau ORA

# اسناد أعمال الجسر الترابي للخط الأول من مشروع القطار الكهربائي السريع (برج العرب - العلمين) (أعمال سن الفلتر) المسافة من الكم ٣٤٥,٩٦٠ إلى الكم ٣٤٧,٤٦٠ بطول ١,٥ كم (بالأمر المباشر).

علاوة بند (٢-٢) علاوة تحصيل رسوم الكارتة والموازين طبقا للائحه الشركة الوطنية.

			٣٩	•,•	مل السابق :	مقدار ال
			لكيلومتري	الموقع ا	. (1)	مسلسل
الكمية (٣م)	المسطح (م٢)	الطول (متر)	الى الكم	من الكم	الكود	مستسل
۱۰۰٤,۱۹	0.,71	۲.	۳٤٦+٤٦·	٣٤٦+٤٤٠	IR-FT-004 Rev02	١
1.729,20	09,77	۱۸۰	۳٤٦+٨٢٠	٣٤٦+٦٤٠	IR-FT-005	٢
۹٦٦,٨٥	٤٨,٣٤	۲.	٣٤٦+٤٨٠	٣٤٦+٤٦.	IR-FT-006	٣
۲۲۸۰٬۸٦	٤٥,٦٢	٥.	۳٤٧+٠٨٠	۳٤٧+.٣.	IR-FT-007 REV02	٤
12991,70		· Las	سي (۳م)	مالي الكمية الهند	اج	
18989,00		12	سبة غرز ٢٠ (م٣	ة بعد احتساب ذ	اجمالي الكمي	
18989,0.		1. 12.	خلص الحالية (م٣	خلال فترة المست	الإجمالي	
		هندس الاستشاري		شاري	مهندس الإست	
مهندس الهيئة	e la	واد/خالد قند	S.J	х	YZ AND A TO	بندس الشركة
م / مارجريت مجد	6	السيد سبات الدير	8	لليل	0 🖓 🔰 ج 🖌 محمد خ	/ محمد حافظ

تــنفيـذ: "شركة اورانج للاستيراد والتصدير"

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+ 133



Contractor Company	22	y For Import & Export and ral Contracting	Desi	gner C	ompa	ny	and the second second	Engine ulting (		
	Name	Sign	Date	e/ Seria	al Nun	nber	Time			
Issued by Contractor	Eng: Abdullah Kamal	2,10,5%			-2023 -007-1		11:00	MA 0		
Received by			C1	C2	C3	DD	MM	YY	НН	MM
GARB	Eng. Saied Saif	Cherceligh MIR	347	EW	CS	27	11	23	11	00

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2		Work Activity	
CODE - 3		Sub Element of Activity	

Descr	iption of N	laterials	als FILTER LAYER							
Locat	ion to be U	sed	From St. (347+020) T	ro St. (347+	080)					
MAR	Approval N	lo	MAR (012)				10-11-2023	10-11-2023		
UIR A	pproval No	)	IR (FT-007)			Date	22-11-2023			
Supp	lier Name		AL-Salam & AL- Howayeg							
Test I	Requireme	nt	P.L.T (DIN 18134)	Spe	cification	1000-0000000000000000000000000000000000	CIFICATIONS & TES			
Refer	ence Photo	os	No	Oth	ier					
Item	Descripti	on		Unit	Quantit	y Arrival Date	Note			
1	Plate load test			NUMBE	R 1	28-11-2023				
2										
3										
4	ments by :	Calad Cal			Commontel	oy: Eng. Alaa Abo	d Allatif (ED)	-		
	وع .		ر القطاع Plate load test التتائج المطلوبة طبقاً لمواد		2-Results repo specifications	arried-out By (CEL) ort attached and a i. val is subject to ab	cceptable with p	roject		
			4	APPROVAL	STATUS					
Orga	nisation	Name		Sign		Date	A-A	WC-R		
Contr	ractor	Eng: Ab	dullah Kamal		1,16	4		А		
QA/O	IC *	Eng. Sa	ied Saif	1 cha	ro, ibr	ei	ł	A		
	**	Eng Ma	argret Magdy							
GARB		Eng. m	0				and the second se			

\*\* Alignment / Bridges: Culvert Only

File: M.I.R-007

Page 1 of 1



#### Company : Orange contraction.

Project : Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Sector (5) - Borg Al Arab to El Hamam.

Subject : Determine the deformation and strength characteristics of soil by the plate loading test according specifications DIN 18134:2012-04 and project requirements Test Location : Station (347+020 to 347+080) Test Date : 27/11/2023

Repot Date : 28/11/2023 Type of soil : fill filter Test level : ----Report No. : 010

#### Dear Gentleman,

According to the above mentioned subject the test performed as follows:-

#### Apparatus

- 1 Loading plates consists of one plate with 300 mm diameter
- 2. The thickness of plates 30 mm
- 3. Dial gauges with accuracy 0.01 mm to measuring the settlement
- 4. Steel straightedges with magnetic supports to fixed the dial gauges
- 5 Hydraulic jack with pump to transfer reactive loads to the loading plates
- 6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
- 7 Reaction loading system by roller compactor with weight approximately 15 ton
- 8. Calibration certificates are attached

#### **Test Procedure**

- 1 Clean the ground on test area to the required level with undisturbed soil
- 2 Install loading plate 300 mm diameter, hydraulic jack and 3 dial gauges
- 3 Prior to starting the test applied preloading about 30 seconds.
- 4 The strain gauge and the dial gauge shall be set to zero
- 5 For a 300 mm loading plate, the limit values are 5.0 kg/cm<sup>2</sup>
- The load shall be applied in six stages, in approximately equal increments, until the required maximum normal stress is reached.
- 7 Each change in load (from stage to stage) shall be completed within one minute
- 8 The load shall be released in 3 stages, to 50 % , 25 %, and approximately 2 % of the maximum load
- 9 Following unloading, a further (2<sup>nd</sup>) loading cycle shall be carried out, in which, however, the load is to be increased only to the penultimate stage of the first cycle (so that the full load is not reached).
- 10 At each stage the load shall be maintained until the rate of settlement of the plate becomes less than 0.02 mm/min.
- 11. Remove the loads

FL ب معامسل الإستشسارات الهندس الساحسل الشمالسي 02 الركو الرئيس: \* شلوه اللك الأختل . الزمالك . التأمود

3 El Malek El Afdal Street Zaoudek, Cairo. Lel & Fax : 27367231 - 27363093



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#### Report

- 1. Evaluation and representation of results
- 2 Load Settlement curve
- 3 The test report content the following:-
- · location of test site Dimension of loading plate
- Measuring device used Type of soil
- · Type of Bedding material below the plate -Weathering condition
- Time and date of measurements Unusual observation made during test
- Dial gauge reading and corresponding normal stress Loading-settlement curve
- · Description of the soil condition below the plate after testing

#### Report

- Type of Soil : fill filter
- Job requirement : Ev2 ≥ 50 Mpa

Item	Descriptions
- Type of bedding material below the plate	Natural Soil
- Weather condition	Partly Sunny
- Plate Diameter (mm)	300
- date of measurement	27/11/2023
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

### Evaluation and representation of results

Test	Challen	First Cycle	Second Cycle	E JE Datia
No.	Station	Evi (MPa)	Ev2 (MPa)	Ev2/ Ev1 Ratio
1	347+050	69	153	2.2

Signature /



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Company Name	: Orange contraction.	
Project	Electric Express Train, At Ain Bokhna to Marsa Matrouh Priority Sector	(5) - Borg Al Arab to El Hamam
Test Date	: 27/11/2023	
report date	: 28/11/2023	
Location	: Station 347+050	
Test No.	: 01	
Nonreg	etitive Static Plate Load Tests of Soils	Data sheet
	5151 46464	Data prieer

DIN 18134 Loading Stage (1) Stress Settlement Settlement Settlement Loading Dial 3 Average Dial 1 Dial 2 Kg/cm2 mm mm mm 0.00 0.00 0.00 0.00 0.00 20.00 0 20.00 20.00 0.15 19.85 19.67 19.83 0.83 0.15 0,17 19.85 0.34 1.67 0.33 0.39 19.71 0.29 2 2 50 3 33 0.54 0.62 0.70 19.38 19.11 3 19.46 19:30 0.89 18.92 1.08 0.90 19.28 4 1.32 4.17 1.18 19.12 0.88 18.82 18.68 5 1.56 1.33 1.46 5.00 0.96 18.54 18.44 6 19.04

#### Unloading Stage (1)

a ser an a	Stress	-	Settlement	01-1-0	Settlement	Dial 3	Settlement	Averane	
Loading	Kg/cm2	Dial 1	mm	Dial 2	mm	Dial 3	mm	Average	
1	5 00	19.04	0.96	18.54	1.46	18.44	1.56	1.33	
2	2.50	19.08	0.92	18.60	1,40	18.49	1.51	1.28	
3	1.250	19.18	0.82	18.68	1,32	18.55	1.45	1 20	
4	0.05	19.42	0.58	18.83	1.17	18.78	1.22	0.99	

#### Loading Stage (2)

Loading	Stress	Dial 4	Settlement	Dial 2 Settlement Dial 3 mm	Dial 2	Settlement	Average	
	Kg/cm2	Dial 1	mm			mm	Dia 3	mm
0	0 83	19.30	0.70	18.69	1.31	18.71	1.29	1.10
1	1.67	19.17	0.83	18.52	1.48	18.49	1.51	1.27
2	2.50	19.05	0.95	18.38	1.62	18.42	1.58	1.38
з	3,33	18.93	1.07	18.76	1.74	18.30	1.70	1.50
4	4.17	18.80	1.20	18.13	1.87	18.17	1.83	1.63

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 Company Name
 : Orange contraction.

 Project
 :Electric Express Train, Al Aln Sokhna to Marsa Matrouh Priority Sector (5) - Borg Al Arab to El Hamam.

 Test Date
 : 27/11/2023

 report date
 : 28/11/2023

 Location
 : Station 347+050

 Test No
 : 01

#### Nonrepetitive Static Plate Load Tests of Solls DIN 18134

	010 01	5 0.50	0.75 1	1.25	1.50 1.3		2.25 2		108 12	1 3.14	175 4	20 6.25	4.30 4.7	5 5 5 5 Z
8.83	2			- 1-										
13	2	1	-		-				1	-				
13					-		-		-		-			
14	8		-			1	-							
12		_					>	_		-	-		-	
13								-	~	_				
- 88					-					~	-			
18	1		-				1							
H		- and an			-								-	_
13				_										
13					-	-			-	-				
1.20		-	-		-	-			-				1	
13	8 5 1	1	1	- die			1		1		-		1 1	

Loading (1)	0	1	2	3	-4	5	6
Stage(Kg)	0	2345.58	4719.4	7065	9410.0	11784	14130
Stress (Kgiom2)	0.00	0.83	1.67	2.50	3.33	4.17	5.00
Settlement (mm)	0.00	0.16	0.34	0.62	0.90	1.13	1.53

Durrenning (1)	1			
Stage(Kg)	14130	7065	1768	0
Stress (Kg/cm2)	5.00	2.50	0.625	0.01
Settlement (mm)	1.33	128	1.20	0.99

Т

Т

Ev2/Ev1 = 2.2

= (mm) =	300	S1 (mm)=	0.30	\$2(mm)=	0.94	05 =	0.64
Evi (MPa)=	(0.75*D*Aa)/AS		69				

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0	2345.58	4719.4	7065	9410.0	11784
Stress (Kg/cm2)	0.01	0.83	1.87	2.50	3,33	4.17
Settlement (mm)	0.99	1.10	\$ 27	1.38	1 50	1.63

() (mm) = 300	S1 (min)#	1.24	\$2(mm)= 1.53	DS=	0.28
Ex2 (MPA) = (0.75*D*Ao)(AS		153			

Evi - Modulus of deformation during the loading stage.

Eva - Modulus of deformation during the Reloading stage

O - Plate diameter (mm)

no - The difference between 0.3 and 0.7 from the maximum loading (snear) (legicm<sup>2</sup>)

 $\mathrm{tr} = \mathrm{D}$  thermal in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm)

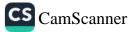
CEI	
مكتب مدامل الستشارات الهندسية	
Alexand Child II	1
210 941 51" contraction	1 de
	1 -



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Contractor Company		y For Import & Export and ral Contracting	Desi	Designer Company		(KK) Engineering Consulting Office				
	Name	Sign	Date	/ Seria	al Nun	nber	Time	05		
Issued by Contractor	Eng: Abdullah Kamal	عبدالله كتال			-2023 -005-1		11:00	MAC		
Received by			C1	C2	C3	DD	MM	YY	нн	MM
GARB CONSULTANT	Eng. Saied Saif	Holdelaki MIR	346	EW	CS	22	10	23	11	00

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2		Work Activity	
CODE - 3		Sub Element of Activity	

Descri	iption of M	aterials	FILTER LAYER								
ocati	on to be U	sed	From St. (346+640) T	o St. (34	5+820)						
MAR	Approval N	lo	MAR (009) , MAR (0	), MAR (010), MAR (011)			Date	20-09-2023 20-09-2023			
UIR A	pproval No	)	IR (FT-005)					12-10-2023			
Suppl	ier Name		AL-Salam & AL- Howayeg					70			
Test F	Requireme	nt	P.L.T (DIN 18134)	S	Specification			ARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-41.2) VERSION 2 BY CIVECO SROUP.			
Refer	ence Photo	os	No	0	ther						
Item	Descripti	on	「「小人の」とは「日本」	Unit		Quantity	Arrival Date	Note			
1	Plate load			NUMB	ER	2	24-10-2023		_		
2											
3									-		
4	nents by : :			Cherris In Charter In	6		: Eng. Alaa Abo				
			ار القطاع Plate load test ق النتائج المطلوبة طبقاً لموا	:- تم إختبا :- تم تحقيز	2 2-R spe 3-F	esults repor cifications.	ried-out By (CEL) t attached and a al is subject to ab	cceptable with proje	ect		
命に			A	PPROVA	L STA	TUS					
Organ	nisation	Name		Sign		_	Date	A-AWO	C-R		
Contr	actor	Eng: Ab	dullah Kamal		JL	بدالله كح	9	Α			
QA/Q	(C *	Eng. Sai	ed Saif	kho	ileo	Saw	ü 🗌	A			
GARB	}**	Eng. Ma	argret Magdy					A STATE	1		
	oyers esentative	Eng. Ala	aa Abd-Allatif		_	El	17 25-10	-loss Au	50		

\* Designer \*• Alignment / Bridges: Culvert Only

File: M.I.R-005



## <u>Company</u> : Orange contraction.

Project : Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Sector (5) - Borg Al Arab to El Hamam.

Subject : Determine the deformation and strength characteristics of soil by the plate loading test according specifications DIN 18134:2012-04 and project requirements Test Location : Station (346+640 to 346+820)

Test Date : 22/10/2023 Repot Date : 24/10/2023 Type of soil : fill filter Test level : ----Report No. : 006:007

### Dear Gentleman,

According to the above mentioned subject the test performed as follows:-

### **Apparatus**

- 1. Loading plates consists of plate 300 mm diameter
- 2. The thickness of plates 30 mm
- 3. Dial gauges with accuracy 0.01 mm to measuring the settlement
- 4. Steel straightedges with magnetic supports to fixed the dial gauges
- 5. Hydraulic jack with pump to transfer reactive loads to the loading plates
- 6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
- 7. Reaction loading system by roller compactor with weight approximately 15 ton
- 8. Calibration certificates are attached

#### **Test Procedure**

- 1. Clean the ground on test area to the required level with undisturbed soil
- 2. Install loading plate 300 mm diameter, hydraulic jack and 3 dial gauges
- 3. Prior to starting the test applied preloading about 30 seconds.
- 4. The strain gauge and the dial gauge shall be set to zero
- 5. For a 600 mm loading plate, the limit values are 5 kg/cm<sup>2</sup>

02

- The load shall be applied in six stages, in approximately equal increments, until the required maximum normal stress is reached.
- 7. Each change in load (from stage to stage) shall be completed within one minute
- 8. The load shall be released in 3 stages, to 50 % , 25 %, and approximately 2 % of the maximum load.
- 9. Following unloading, a further (2<sup>nd</sup>) loading cycle shall be carried out, in which, however, the load is to be increased only to the penultimate stage of the first cycle (so that the full load is not reached).
- 10. At each stage the load shall be maintained until the rate of settlement of the plate becomes less than 0.02 mm/min.
- 11. Remove the loads

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# Report

- 1. Evaluation and representation of results
- 2. Load Settlement curve
- 3. The test report content the following:-
- · location of test site Dimension of loading plate
- · Measuring device used Type of soil
- Type of Bedding material below the plate -Weathering condition
- Time and date of measurements Unusual observation made during test
- Dial gauge reading and corresponding normal stress Loading-settlement curve
- Description of the soil condition below the plate after testing

# Report

# Type of Soil : fill filter

Item	Descriptions
- Type of bedding material below the plate	Natural Soil
- Weather condition	Partly Sunny
- Plate Diameter (mm)	300
- date of measurement	22/10/2023
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

# Evaluation and representation of results

	First Cycle	Second Cycle	E I E Patia	
Station	Ev₁ (MPa)	Ev2 (MPa)	Ev2/ Ev1 Ratio	
346+700	71	180	2.5	
346+800	ب معامل الإستشبادات الساحسل الشعال	208	3.1	
	346+800	Station         Ev1 (MPa)           346+700         71           346+800         CEL	Station         Ev1 (MPa)         Ev2 (MPa)           346+700         71         180           346+800         CE 67         208	

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Company Name	: Orange contraction.
Project	Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Sector (5) - Borg Al Arab to El Hamam.
Test Date	: 22/10/2023
report date	: 24/10/2023
Location	: Station 346+700
Test No.	: 06
Nonror	patitive Static Plate Load Tests of Soils

#### Nonrepetitive Static Plate Load Tests of Soils DIN 18134

Data sheet

# Loading Stage (1)

Loading Stress Kg/cm2	Dial 1	Settlement	Dial 2	Settlement	Dial 3	Settlement	Average	
	Diar 1	mm Dial 2	mm	Dial 3	mm	, tronge		
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	0.83	19.82	0.18	19.78	0.22	19.68	0.32	0.24
2	1.67	19.59	0.41	19.60	0.40	19.33	0.67	0.49
3	2.50	19.40	0.60	19.38	0.62	18.98	1.02	0.75
4	3.33	19.11	0.89	19.08	0.92	18.76	1.24	1.02
5	4.17	18.86	1.14	18.82	1.18	18.53	1.47	1.26
6	5.00	18.60	1.40	18.58	1.42	18.28	1.72	1.51

## Unloading Stage (1)

Loading Stress Kg/cm2	Dial 1	Settlement	Dial 2	Settlement	Dial 3	Settlement	Average	
	Dial 1	mm	Dial 2	mm	Dial 3	mm	Average	
1	5.00	18.60	1.40	18.58	1.42	18.28	1.72	1.51
2	2.50	18.66	1.34	18.63	1.37	18.35	1.65	1.45
3	1.250	18.75	1.25	18.72	1.28	18.48	1.52	1.35
4	0.05	19.06	0.94	18.97	1.03	18.87	1.13	1.03

#### Loading Stage (2)

Loading	Stress	Diel 4	Settlement	Dial 2	Settlement	Dial 3	Settlement	
	Kg/cm2	Dial 1	mm	Dial 2	mm	Dial 3	mm	Average
0	0.83	18.95	1.05	18.86	1.14	18.80	1.20	1.13
1	1.67	18.86	1.14	18.75	1.25	18.65	1.35	1.25
2	2.50	18.77	1.23	18.67	1.33	18.48	1.52	1.36
3	3.33	18.65	1.35	18.60	1.40	18.39	1.61	1.45
4	4.17	18.56	1.44	18.52	1.48	18.31	1.69	1.54



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مكتب معامل الإستشارات الهندسية

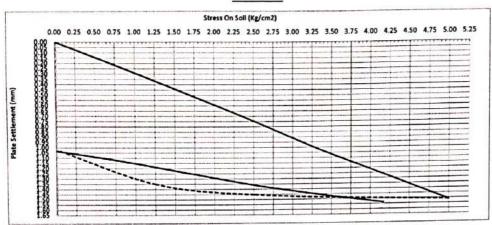
Company Name Project Test Date report date Location Test No.

: Orange contraction.

:Electric Express Train, Al Aln Sokhna to Marsa Matrouh Priority Sector (5) - Borg Al Arab to El Hamam. : 22/10/2023 : 24/10/2023

: Station 346+700 : 06

#### Nonrepetitive Static Plate Load Tests of Soils DIN 18134



Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	589	1178	1767	2357	2946	3535
Stress (Kg/cm2)	0.00	0.83	1.67	2.50	3.33	4.17	5.00
Settlement (mm)	0.00	0.24	0.49	0.75	1.02	1.26	1.51

D (mm) =	300	S1 (mm)=	0.44	S2(mm)=	1.06	ΔS =	0.62
Ev1 (MPa) =	(0.75°D°∆σ)/∆S		71				

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0	589	1178	1767	2357	2946
Stress (Kg/cm2)	0.00	0.83	1.67	2.50	3.33	4.17
Settlement (mm)	1.03	1.13	1.25	1.36	1.45	1.54

D (mm) =	300	S1 (mm)=	1.22	S2(mm)=	1.47	∆S =	0.25
Ev2 (MPa) =	(0.75*D*Δσ)/ΔS		179				

Ev1 = Modulus of deformation during the loading stage

Ev2 = Modulus of deformation during the Reloading stage D = Plate diameter (mm)

Δσ = The difference between 0.3 and 0.7 from the maximum loa

As = Difference in settlements corresponding to 0.3 and 0.7 from

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3 4 UnLoading (1) 2 1 0 883 35 Stage(Kg) 1767 1.250 0.05 5.00 2.50 Stress (Kg/cm2) 1.35 1.03 1.51 1.45 Settlement (mm)

Ev2/Ev1 = 2.5

GEL

Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات المندسية

Company Name	: Orange contraction.
Project	:Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Sector (5) - Borg Al Arab to El Hamam.
Test Date	: 22/10/2023
report date	: 24/10/2023
Location	: Station 346+800
Test No.	: 07

### Nonrepetitive Static Plate Load Tests of Soils DIN 18134

Data sheet

....

# Loading Stage (1)

Loading	Stress		Settlement		Settlement	Dial 3	Settlement	Average
Kg/cm2	Dial 1		Dial 2	mm	Dial 3	mm		
		mm				0.00	0.00	
0	0.00	20.00	0.00	20.00	0.00	20.00		0.25
1	0.83	19.75	0.25	19.81	0.19	19.68	0.32	
-			0.68	19.60	0.40	19.37	0.63	0.57
2	1.67	19.32			0.64	19.01	0.99	0.88
3	2.50	19.00	1.00	19.36			1.22	1.12
4	3.33	18.80	1.20	19.05	0.95	18.78		1.34
5	4.17	18.66	1.34	18.72	1.28	18.59	1.41	
6	5.00	18.43	1.57	18.52	1.48	18.40	1.60	1.55

#### Unloading Stage (1)

Stress		Í	Settlement		Settlement	Dial 2	Settlement	Average
Loading Kg/cm2	Dial 1	mm	Dial 2	mm	Dial 3	mm	, shuge	
		10.42	1.57	18.52	1.48	18.40	1.60	1.55
1	5.00	18.43	1.48	18.61	1.39	18.48	1.52	1.46
2	2.50	18.52	and the second se	18.75	1.25	18.55	1.45	1.35
3	1.250	18.65	1.35		0.95	18.84	1.16	1.06
4	0.05	18.92	1.08	19.05	0.35	10.04	1.10	1.00

### Loading Stage (2)

Loading	Loading Stress		Settlement	Diel 0	Settlement	Dial 3	Settlement	Average
Kg/cm2	Dial 1	mm	Dial 2	mm	Dial 3	mm	Average	
0	0.83	18.83	1.17	18.94	1.06	18.77	1.23	1.15
1	1.67	18.74	1.26	18.82	1.18	18.70	1.30	1.25
2	2.50	18.63	1.37	18.75	1.25	18.62	1.38	1.33
3	3.33	18.55	1.45	18.66	1.34	18.53	1.47	1.42
4	4.17	18.46	1.54	18.54	1.46	18.43	1.57	1.52



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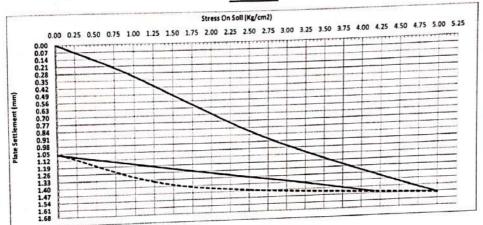
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Company Name Project Test Date report date Location Test No.

- Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Sector (5) Borg Al Arab to El Hamam. : Orange contraction.
- : 22/10/2023
- : 24/10/2023 : Station 346+800
- : 07

#### Nonrepetitive Static Plate Load Tests of Soils DIN 18134



	1	2	3	4	5	6
0		-		0057	2046	3535
0	589	1178	1767	2357	Charles and the first	-
-		1.67	2 50	3.33	4.17	5.00
0.00	0.83	1.07	Carrier Courses	1.11.1.11.1.1.1	1.04	1.55
0.00	0.25	0.57	0.88	1.12	1.34	1.55
	0 0 0.00 0.00	0 589 0.00 0.83	0         589         1178           0.00         0.83         1.67	0         589         1178         1767           0.00         0.83         1.67         2.50	0         589         1178         1767         2357           0.00         0.83         1.67         2.50         3.33           0.00         0.83         1.67         0.88         1.12	0         589         1178         1767         2357         2946           0.00         0.83         1.67         2.50         3.33         4.17           0.00         0.83         1.67         0.88         1.12         1.34

UnLoading (1)	1	2	3	4
Stage(Kg)	1767	883	35	0
Stress (Kg/cm2)	5.00	2.50	1.250	0.05
Settlement (mm)	1.55	1.46	1.35	1.06

Ev2/Ev1 =

3.1

	1	S1 (mm)=	0.51	S2(mm)=	1.17	∆S =	0.66
D (mm) = 300 Ev1 (MPa) = (0.75*D	)•∆σ)/∆S		67				
1	0		2	3	4	5	
Loading (2)	0	589	1178	1767	2357	2946	
Stage(Kg)	0.00	0.83	1.67	2.50	3.33	4.17	
Stress (Kg/cm2)	1.06	1.15	1.25	1.33	1.42	1.52	

D(mm) =	300	S1 (mm)=	1.23	S2(mm)= 1.44	ΔS = 0.21
D (mm) = Ev2 (MPa) =	(0.75°D*∆σ)/∆S		208		

02

haximum loading (mm):

1.15

1.06

Ev1 = Modulus of deformation during the loading stage

Ev2 = Modulus of deformation during the Reloading stage

D = Plate diameter (mm)

Settlement (mm)

 $\Delta \sigma$  = The difference between 0.3 and 0.7 from ∆s = Difference in settlements correspo

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	Name	Sign	Date	/ Seria	al Nun	nber	Time	1		
Issued by Contractor	Eng: Abdullah Kamal	عبدالله فحسال			-2023 -004-1		11:00			
Received by			C1	C2	C3	DD	MM	YY	нн	MM
GARB	Eng. Saied Saif	thaled Zaki' MIR	346	EW	CS	22	10	23	11	00

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2		Work Activity	
CODE - 3		Sub Element of Activity	

escri	ption of Ma	terials	FILTER LAYER							
ocatio	on to be Use	ed	From St. (346+360)	To St. (34	;+460)					
MAR A	Approval No	i.	MAR (008) , MAR	(009)	09)					23 23
UIR Approval No			IR (FT-004)				Date		28-09-20	023
Suppli	ier Name		AL-Salam & AL- Howayeg							
Test R	Requiremen	t	P.L.T (DIN 18134)	S	oecifica	ation	EARTHWOR REPORT (CG GROUP.	K SPEC 21-41.	IFICATIONS 2) VERSION	2 BY CIVECON
Refer	ence Photos	5	No	0	ther					
Item	Descriptio	n	"一些"。此后却已经有了	Unit	No. 1	Quantity			Note	
1	Plate load			NUME	ER	1	24-10-2	023		
2						-				
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4	nents by : S		· ····	Landson West	Co	mments b	y: Eng. Ala	a Abd	-Allatif (E	(R)
	روع .	مقات المش	القطاع Plate load test النتائج المطلوبة طبقاً لموام	<ul> <li>آم إختبار ا</li> <li>تم تحقيق ا</li> </ul>	3-F	esults repo		and ac	ceptable	with project oned
1908 E.	en standarten	an a		APPROV	AL STA	TUS				
Orga	nisation	Name		Sign			Da	te		A-AWC-R
	ractor	Eng: A	bdullah Kamal		01	3aul	عبد			A
	QC *	Eng. Sa	aied Saif	ph	nla	da	Z'			A
QA/O										PHILIPPENE PART
QA/C	B**	Eng. N	largret Magdy							AW

\* Designer \*\* Alignment / Bridges: Culvert Only

File: M.I.R-004



Contractor Company		For Import & Export and ral Contracting		gner C				inginee Ilting C		
	Name	Sign	Date	/ Seria	al Nun	nber	Time			
Issued by Contractor	Eng: Abdullah Kamal	عبدالله كحمال			-2023 -006-1		11:00		1	
Received by			C1	C2	C3	DD	MM	YY	нн	MM
GARB CONSULTANT	Eng. Saied Saif	KhaledZaki MIR	346	EW	cs	22	10	23	11	00

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2	Station network	Work Activity	
CODE - 3		Sub Element of Activity	

escri	ption of Ma	terials	FILTER LAYER							
ocatio	on to be Us	ed	From St. (346+460) T	o St. (346+4	80)					
MAR A	Approval No	)	MAR (011) , MAR (0	(012)			Date			
UIR Ap	JIR Approval No IR (FT-006)		IR (FT-006)				Du		16-10-20	23
Suppli	ier Name		AL-Salam & AL- Howayeg						FIGNERAL	9 TECTING
Test R	lequiremen	t	P.L.T (DIN 18134)	Spe	cificat	tion	EARTHWO REPORT ( GROUP.	CG21-41.2	FICATIONS 2) VERSION	2 BY CIVECON
Refere	ence Photo	s	No	Oth	er					
Item	Descriptio	n		Unit	139	Quantity	Arriva	I Date	Note	
1	Plate load			NUMBER	۲	1	24-10	-2023		State State
2	1.012.11									
3										NORTH AND
4				Contraction of the local		nments by	U Eng A	las Abd	Allatif /E	D)
Comn	nents by : s روع .		القطاع Plate load test. النتائج المطلوبة طبقاً لموام	<ul> <li>1- تم إختبار</li> <li>2- تم تحقيق</li> </ul>	2-Re spec 3-Fi	L.T was car esults repor cifications. nal approve iments.	rt attache	ed and a	ceptable	with project oned
tering te	ant state where	Sec. Tak		APPROVAL	STA	TUS				
Orga	nisation	Name		Sign				Date		A-AWC-R
	ractor		bdullah Kamal		dL	ZWI	عبدا	- and		A
QA/Q	QC *	Eng. Sa	aied Saif	chal	eo	1210	21	1	and the second	A
GAR	B**	Eng. N	largret Magdy	A			1.24			
				N		00	12	001	-2023	A 10

\* Designer \*\* Alignment / Bridges: Culvert Only

File: M.I.R-006



#### : Orange contraction. Company

: Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Project Sector (5) - Borg Al Arab to El Hamam.

: Determine the deformation and strength characteristics of soil by the plate Subject loading test according specifications DIN 18134:2012-04 and project requirements

Test Location : Station (346+360 to 346+	480)
--	------

: 22/10/2023 Test Date : 24/10/2023 Repot Date Type of soil : fill filter Test level : ----: 004:005 Report No.

## Dear Gentleman,

According to the above mentioned subject the test performed as follows:-

## Apparatus

- 1. Loading plates consists of plate 300 mm diameter
- 2. The thickness of plates 30 mm
- 3. Dial gauges with accuracy 0.01 mm to measuring the settlement
- 4. Steel straightedges with magnetic supports to fixed the dial gauges
- 5. Hydraulic jack with pump to transfer reactive loads to the loading plates
- 6. Dial indicator measuring device with scale capacity 700 Bar (Enerbac)
- 7. Reaction loading system by roller compactor with weight approximately 15 ton
- 8. Calibration certificates are attached

### **Test Procedure**

- 1. Clean the ground on test area to the required level with undisturbed soil
- 2. Install loading plate 300 mm diameter, hydraulic jack and 3 dial gauges
- 3. Prior to starting the test applied preloading about 30 seconds.
- 4. The strain gauge and the dial gauge shall be set to zero
- 5. For a 600 mm loading plate, the limit values are 5 kg/cm<sup>2</sup>
- 6. The load shall be applied in six stages, in approximately equal increments, until the required maximum normal stress is reached.
- 7. Each change in load (from stage to stage) shall be completed within one minute
- 8. The load shall be released in 3 stages, to 50 % , 25 %, and approximately 2 % of the maximum load.
- 9. Following unloading, a further (2<sup>nd</sup>) loading cycle shall be carried out, in which, however, the load is to be increased only to the penultimate stage of the first cycle (so that the full load is not reached).
- ettlement of the plate becomes 10. At each stage the load shall be me ne cate of less than 0.02 mm/min.

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11. Remove the loads

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# Report

- 1. Evaluation and representation of results
- 2. Load Settlement curve
- 3. The test report content the following:-
- · location of test site Dimension of loading plate
- · Measuring device used Type of soil
- Type of Bedding material below the plate -Weathering condition
- Time and date of measurements Unusual observation made during test
- Dial gauge reading and corresponding normal stress Loading-settlement curve
- Description of the soil condition below the plate after testing

## Report

# • Type of Soil : fill filter

Item	Descriptions
- Type of bedding material below the plate	Natural Soil
- Weather condition	Partly Sunny
- Plate Diameter (mm)	300
- date of measurement	22/10/2023
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

# Evaluation and representation of results

Test		First Cycle	Second Cycle	
No.	Station	Ev1 (MPa)	Ev2 (MPa)	Ev2/ Ev1 Ratio
1	346+400	67	173	2.6
2	346+420	68	173	2.5

Signature مر: \* شرع اللك الأختل - الوَّمانك - التار

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Company Name Project Test Date report date Location Test No.

:Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Sector (5) - Borg Al Arab to El Hamam.

: Orange contraction.

: 22/10/2023 : 24/10/2023

: Station 346+400

: 04

### Nonrepetitive Static Plate Load Tests of Soils DIN 18134

# Loading Stage (1)

Londing	Loading Stress		Settlement		Settlement	Diel 2	Settlement	Average
Loading		Dial 1		Dial 2	mm	Dial 3	mm	
	Kg/cm2		mm				0.00	0.00
0	0.00	20.00	0.00	20.00	0.00	20.00		0.24
1	0.83	19.79	0.21	19.76	0.24	19.72	0.28	
2	1.67	19.58	0.42	19.60	0.40	19.40	0.60	0.47
2			0.66	19.40	0.60	19.13	0.87	0.71
3	2.50	19.34		19.03	0.97	18.85	1.15	1.04
4	3.33	19.00	1.00			18.60	1.40	1.29
5	4.17	18.75	1.25	18.78	1.22			1.56
6	5.00	18.50	1.50	18.46	1.54	18.37	1.63	1.00

#### Unloading Stage (1)

moudin	Stress		Settlement		Settlement	Dial 3	Settlement	Average
Loading Kg/cm2	Dial 1	mm	Dial 2	mm		mm		
-	5.00	18.50	1.50	18.46	1.54	18.37	1.63	1.56
1	2.50	18.62	1.38	18.54	1.46	18.43	1.57	1.47
2	1.250	18.80	1.20	18.72	1.28	18.56	1.44	1.31
3	0.05	19.25	0.75	19.31	0.69	18.93	1.07	0.84

#### Loading Stage (2)

Loading	Stress		Settlement	Dial 2	Settlement	Dial 3	Settlement	Average	
Loading	Kg/cm2	Dial 1	mm	Dial 2	mm	Dial J	mm	rivolugo	
0	0.83	19.13	0.87	19.20	0.80	18.85	1.15	0.94	
1	1.67	19.00	1.00	19.11	0.89	18.77	1.23	1.04	
2	2.50	18.88	1.12	19.00	1.00	18.68	1.32	1.15	
3	3.33	18.78	1.22	18.85	1.15	18.61	1.39	1.25	
4	4.17	18.69	1.31	18.73	1.27	18.49	1.51	1.36	



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Data sheet



Company Name Project Test Date report date Location Test No.

: Orange contraction.

:Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Sector (5) - Borg Al Arab to El Hamam.

Nonrepetitive Static Plate Load Tests of Soils **DIN 18134** 

								5	tress	On S	oll (Kg.	(cm2)										
	00 0	25 0.50	0.7	5 1 (	00 1	25 1	50 1	75	2.00	2.25	2.50	2.7	5 3.0	0 3.	25 3	.50 3	1.75	4.00	4.25	4.50	4.75	5.00
	.00 0												****		1111		1					
.00	~					-											-	1				
.14	1	-					-		-											-		-
1.21			~					+	+									-				-
.28	-			-	5	1	1															
.35	1		ana series			-										-	-	+-		-		
.42	1																	+	<b>+</b>			
.49	1	1					-	-	-								-	-				
.63	-						-	-	-	~	-	-				-						
.70			-			-		-													-	
0.77	1-				-	1	1	-				1	-				-			-	-	-
0.84	-					-	-						~				-					
.91	-			-		1			-				-	~	-	-	1	1				-
0.98	1					1		-	-i-				-	-	-			1				
1.12							-										-	-	-	-		-
1.19	1			-	-	-	-	-		-				-	-			-		-	-	-
1.26	-				1	-							_			-	-	-	-	-		
1.33					-	1		1							-		-	-	100	1	-	
1.40	-	1			1									-				1				-
1.47	1	1			-	-									1	1		1		-		-
1.61		-			-					-		-					1	1				
1.61					1	1		1		- uniter					deres a series							

Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	589	1178	1767	2357	2946	3535
Stress (Kg/cm2)	0.00	0.83	1.67	2.50	3.33	4.17	5.00
Settlement (mm)	0.00	0.24	0.47	0.71	1.04	1.29	1.56

D (mm) =	300	S1 (mm)=	0.43	S2(mm)=	1.09	ΔS =	0.66
the second s	(0.75°D°∆σ)/∆S		67				

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0	589	1178	1767	2357	2946
Stress (Kg/cm2)	0.00	0.83	1.67	2.50	3.33	4.17
Settlement (mm)	0.84	0.94	1.04	. 1.15	1.25	1.36

D (mm) =	300	S1 (mm)=	1.02	S2(mm)=	1.27	ΔS =	0.26	1-4
Ev2 (MPa) =	(0.75°D°∆σ)/∆S		173					-ب
				_		200	-	11

Ev1 = Modulus of deformation during the loading stage.

Ev2 = Modulus of deformation during the Reloading stage

 $\Delta \sigma$  = The difference between 0.3 and 0.7 from the maximum (radino 4 max)(kg(cm<sup>2</sup>))  $\Delta s$  = Difference in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm) is the formula of the maximum frequency of the maximum frequency of the maximum frequency of the formula of the formula of the maximum frequency of the maximum frequency of the formula of the formul

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4

0

0.05

0.84

2

883

2.50

1.47

1

1767

5.00

1.56

3

35

1.250

1.31

Ev2/Ev1 = 2.6

UnLoading (1)

Stage(Kg)

Stress (Kg/cm2)

Settlement (mm)

: 22/10/2023 : 24/10/2023

: Station 346+400

:04



 Company Name
 : Orange contraction.

 Project
 : Electric Express Train, AI Ain Sokhna to Marsa Matrouh Priority Sector (5) - Borg AI Arab to El Hamam.

 Test Date
 : 22/10/2023

 report date
 : 24/10/2023

 Location
 : Station 346+420

 Test No.
 : 05

 Nonrepetitive Static Plate Load Tests of Soils
 Data sheet

**DIN 18134** 

oading t	Stage (1)		Settlement		Settlement	Dial 3	Settlement	Average	
oading	Stress	Dial 1	Settiement	Dial 2			mm		
	Kg/cm2	<b>-</b>	mm		mm	20.00	0.00	0.00	
	0.00	20.00	0.00	20.00	0.00	20.00	0.23	0.22	
0		19.75	0.25	19.81	0.19	19.77		0.55	
1	0.83		0.64	19.58	0.42	19.40	0.60	0.82	
2	1.67	19.36		19.29	0.71	19.18	0.82	1.10	
3	2.50	19.07	0.93		1.07	18.95	1.05	1.30	
4	3.33	18.82	1.18	18.93	1.25	18.76	1.24		
5	4.17	18.59	1.41	18.75		18.56	1.44	1.52	
6	5.00	18.35	1.65	18.53	1.47	10.00			

Unloading Stage (1)

Inloadin	g Stage (1	1			Settlement	1000	Settlement	Average
	Stress	Dial 1	Settlement	Dial 2	mm	Dial 3	mm	
Loading	Kg/cm2		mm		1.47	18.56	1.44	1.52
1	5.00	18.35	1.65	18.53	1.35	18.63	1.37	1.43
2	2.50	18.43	1.57	18.65	1.33	18.77	1.23	1.31
- 2	1,250	18.57	1.43	18.73	0.90	19.13	0.87	0.95
4	0.05	18.93	1.07	19.10	0.50			

pading Stage (2)			Settlement		Settlement	Dial 3	Settlement	Average	
oading	Stress	Dial 1		Dial 2	mm		mm	1100	
	Kg/cm2		mm		1.02	19.00	1.00	1.06	
0	0.83	18.83	1.17	18.98	and the second se		1.11	1.17	
-	1.67	18.70	1.30	18.90	1.10	18.89		1.27	
	2.50	18.61	1.39	18.78	1.22	18.80	1.20		
2			1.52	18.66	1.34	18.71	1.29	1.38	
3	3.33	18.48 18.39	1.61	18.53	1.47	18.60	1.40	1.49	



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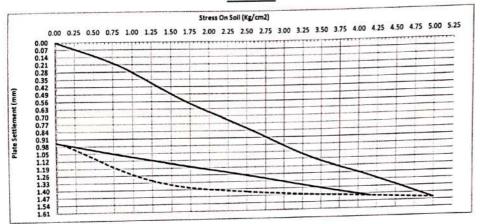


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Electric Express Train, Al Aln Sokhna to Marsa Matrouh Priority Sector (5) - Borg Al Arab to El Hamam. Company Name Project Test Date : 22/10/2023 : 24/10/2023 report date : Station 346+420 Location : 05 Test No.

#### Nonrepetitive Static Plate Load Tests of Soils **DIN 18134**



Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	589	1178	1767	2357	2946	3535
Stress (Kg/cm2)	0.00	0.83	1.67	2.50	3.33	4.17	5.00
Settlement (mm)	0.00	0.22	0.55	0.82	1,10	1.30	1.52

D (mm) =	300	S1 (mm)=	0.49	S2(mm)=	1.14	ΔS =	0.65
Ev1 (MPa) =	(0.75*D*∆σ)/	ΔS	68				

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0	589	1178	1767	2357	2946
Stress (Kg/cm2)	0.00	0.83	1.67	2.50	3.33	4.17
Settlement (mm)	0.95	1.06	1.17	1.27	1.38	1.49

D (mm) =	300	S1 (mm)=	1.15	S2(mm)=	1.40	ΔS =	0.26
Ev2 (MPa) =	(0.75*D*Δσ)/ΔS		172				

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Ev1 = Modulus of deformation during the loading stage.

Ev2 = Modulus of deformation during the Reloading stage. D = Plate diameter (mm)

 $\Delta \sigma$  = The difference between 0.3 and 0.7 from the maximum loading ( and the set of the set  $\Delta s$  = Difference in settlements corresponding to 0.3 and 0.7 from the

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UnLoading (1)	1	2	3	4
Stage(Kg)	1767	883	35	0
Stress (Kg/cm2)	5.00	2.50	1.250	0.05
Settlement (mm)	1.52	1.43	1.31	0.95

Ev2/Ev1 = 2.5

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