

قائمة الكميات الواردة بالمستخلص جاري (1)

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

رقم البند و بيانه : (١-١) أعمال حفر بالمعدات الميكانيكية في التربة المتماسكة (الأراضي الزراعية)

السعر ابتداءً من شهر مايو ٢٠٢٣ طبقاً للمفاوضة الخاصة بالقطاع الخامس أ بتاريخ ١٨-١٢-٢٠٢٣

تنفيذ : "شركة اورانج للاستيراد والتصدير"

عقد رقم (٢٠٢٤/٢٠٢٣/١٧١٤)

مقدار العمل السابق :		٠,٠	٢م		
سلسل	الكود	الموقع الكيلومري		الأبعاد (متر)	
		من الكم	إلى الكم	الطول	العرض
١	C-1	٣٤٥+٩٦٠	٣٤٦+٤٦٠	٥٠٠	٢٢
٢	C-2	٣٤٦+٤٦٠	٣٤٧+٤٨٠	٢٠	٢٢,٥
٣	C-3	٣٤٦+٧٠٠	٣٤٦+٨٢٠	١٢٠	٢٢
٤	C-4	٣٤٧+٢٨٠	٣٤٦+٤٦٠	١٨٠	٢٢,٥
٥	C-5	٣٤٦+٦٤٠	٣٤٦+٧٠٠	٦٠	٢٢
٦	C-6	٣٤٧+٢٠	٣٤٧+٨٠	٦٠	٢٢,٥
٧	C-7	٣٤٦+٦٠٠	٣٤٦+٦٤٠	٤٠	٢٢,٠
٨	C-8	٣٤٦+٤٨٠	٣٤٦+٦٠٠	١٢٠	٢٢,٥
		إجمالي الكميات خلال فترة المستخلص الحالية (٢م)			
		الاجمالي الكلي (٢م)			
		٢٣٦١٤			
		٢٣٦١٤			

مهندس الهيئة
م / مارجيت مجدي

مهندس الاستشاري
مكتب XYZ
م / محمد خليل

مهندس الشركة
م / محمد خالد
م / محمد

مهندس الاستشاري
مكتب XYZ
م / محمد خليل

مهندس الاستشاري
مكتب XYZ
م / محمد خليل

مهندس الشركة
م / محمد خالد
م / محمد

قائمة الكميات الواردة بالمستخلص جاري (١)

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

علاوة بند (٢-٣) علاوة مسافة النقل ١٢٢ كم .

تنفيذ : "شركة اورانج للاستيراد والتصدير"
عقد رقم (٢٠٢٤/٢٠٢٣/١٧١٤)

مقدار العمل السابق :	٠,٠	٣م
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مستسل	الكود	الموقع الكيلومتری		الطول (متر)	المسطح (م)	الكمية (م)
		من الكم	الى الكم			
١	IR-FT-002 Rev01	٣٤٧+٢٦٠	٣٤٧+٢٨٠	٢٠	٤٢,٧٠	٨٥٣,٩٦
٢	IR-FT-003 Rev01	٣٤٥+٩٦٠	٣٤٦+٠٠٠	٤٠	٥١,٣٩	٢٠٥٥,٥٥
٣	IR-FT-007 Rev01	٣٤٧+٠٢٠	٣٤٧+٠٣٠	١٠	٥٠,٣١	٥٠٣,٠٨
٤	IR-FT-008	٣٤٦+٥٦٠	٣٤٦+٦٢٠	٦٠	٥١,٢٦	٣٠٧٥,٨٢
٥	IR-FT-009	٣٤٦+٥٣٠	٣٤٦+٥٦٠	٣٠	٤٩,٤٢	١٤٨٢,٦٦
٦	IR-FT-010	٣٤٦+٦٢٠	٣٤٦+٦٤٠	٢٠	٥٩,١٦	١١٨٣,١٣
٧	IR-FT-011	٣٤٦+٤٨٠	٣٤٦+٥٣٠	٥٠	٢٦,٧٢	١٣٣٦,٢٠
اجمالي الكمية الهندسي (م)						
١٠٤٩٠,٤٠						
اجمالي الكمية بعد احتساب نسبة غرق ٢٠% (م)						
١٢٥٨٨,٤٨						
الاجمالي خلال فترة المستخلص الحالية (م)						
١٢٥٨٨,٤٨						

مهندس الهيئة
م / مارجيت مجدي

مهندس الاستشاري
مكتب أ.د/ خالد فنديل
م / السيد سيف الدين

مهندس الاستشاري
مكتب XYZ
م / محمد خليل

مهندس الشركة
م / محمد حافظ

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قائمة الكميات الواردة بالمستخلص جاري (١)

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

علاوة بند (٢-٣) علاوة تحصيل رسوم الكارثة والموازن طبقا للائحة الشركة الوطنية.

تنفيذ : "شركة اورانج للاستيراد والتصدير"
عقد رقم (٢٠٢٤/٢٠٢٣/١٧١٤)

مقدار العمل السابق :		٠,٠	٢م			
مسلسل	الكود	الموقع الكيلومتری		الطول (متر)	المسطح (م)	الكمية (م)
		من الكم	الى الكم			
١	IR-FT-002 Rev01	٣٤٧+٢٦٠	٣٤٧+٢٨٠	٢٠	٤٢,٧٠	٨٥٣,٩٦
٢	IR-FT-003 Rev01	٣٤٥+٩٦٠	٣٤٦+٠٠٠	٤٠	٥١,٣٩	٢٠٥٥,٥٥
٣	IR-FT-007 Rev01	٣٤٧+٠٢٠	٣٤٧+٠٣٠	١٠	٥٠,٣١	٥٠٣,٠٨
٤	IR-FT-008	٣٤٦+٥٦٠	٣٤٦+٦٢٠	٦٠	٥١,٢٦	٣٠٧٥,٨٢
٥	IR-FT-009	٣٤٦+٥٣٠	٣٤٦+٥٦٠	٣٠	٤٩,٤٢	١٤٨٢,٦٦
٦	IR-FT-010	٣٤٦+٦٢٠	٣٤٦+٦٤٠	٢٠	٥٩,١٦	١١٨٣,١٣
٧	IR-FT-011	٣٤٦+٤٨٠	٣٤٦+٥٣٠	٥٠	٢٦,٧٢	١٣٣٦,٢٠
اجمالي الكمية الهندسي (م)						
١٠٤٩٠,٤٠						
اجمالي الكمية بعد احتساب نسبة غرز ٢٠% (م)						
١٢٥٨٨,٤٨						
الاجمالي خلال فترة المستخلص الحالية (م)						
١٢٥٨٨,٤٨						

مهندس الهيئة
م / مارجيت مجدي

مهندس الاستشاري
مكتب أ.د. خالد قنديل
م / السيد سفيان الدين

مهندس الاستشاري
مكتب XYZ
م / محمد خليل

مهندس الشركة
م / محمد جافط
م / م / م / م

مهندس الاستشاري
مكتب أ.د. خالد قنديل
م / السيد سفيان الدين

مهندس الاستشاري
مكتب XYZ
م / محمد خليل

مهندس الشركة
م / محمد جافط
م / م / م / م

محضر استلام موقع عملية

العملية:

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

تنفيذ: "شركة أورانج للاستيراد والتصدير"

استشاري المشروع: المكتب الاستشاري الهندسي (أ.د/خالد قنديل)

إشراف: المنطقة الخامسة - منطقة غرب الدلتا

طبقاً للعقد رقم (١٧١٤-٢٠٢٣-٢٠٢٤) بتاريخ (٢٦/٠٦/٢٠٢٤)

أنه في يوم الأحد الموافق ٢٠٢٤/٠٧/٢١ اجتمع كل من:

- | | |
|-----------------------------|---|
| ١- المهندس / محمد حسني فياض | مدير عام المشروعات - الهيئة العامة للطرق والكباري |
| ٢- المهندسة / مارجريت مجدي | مهندس العملية - الهيئة العامة للطرق والكباري |
| ٣- المهندس / محمد حافظ | مدير مشروع - شركة أورانج للاستيراد والتصدير |

وذلك للمرور على مسار العملية المذكورة عالية لاستلام الموقع.

وقد تبين أن الموقع خالياً من العوائق الظاهرية ويسمح بالبداة في التنفيذ وبناء عليه يعتبر تاريخ ٢٠٢٤/٠٧/٢١ هو تاريخ استلام الموقع وبداة أعمال الإشراف بالعملية.

واقفل المحضر على ذلك ووقع الحضور.

التوقيعات:

٣- محمد عاصم

٢-

١-

رئيس الإدارة المركزية
منطقة غرب الدلتا
الاسكندرية - مرسى مطروح
عبد مهندس /
هاني محمد محمود طه

المنطقة الخامسة - (غرب الدلتا)

السيد المهندس / نائب رئيس مجلس الإدارة للتنفيذ والمناطق

تحية طيبة.. وبعد،،

بالإحالة إلى مشروع القطار الكهربائي السريع قطاع (برج العرب - العلمين)
نتشرف بأن نرفق لسيادتكم طيه المقايسة المعدلة للقطاع الآتي :

المسلسل	اسم الشركة	من كم	إلى كم	بطول
1	شركة اورانج للاستيراد والتصدير ستيراد والتصدير عقد 2024/2023/1714	345+960	347+460	1.5 كم

برجاء من سيادتكم التفضل بالأحاطه والتوجيه بالازم

وتفضلوا بقبول فائق الاحترام والتقدير،،

رئيس الإدارة المركزية

المنطقة الخامسة - غرب الدلتا

عميد مهندس /

" هاني محمد محمود طه "

المقاييس المعدلة لعملية

استاد أعمال الجسر الترابي للخط الأول من مشروع القطار الكهربائي السريع (برج العرب - العلمين) (أعمال الحفر)
المسافة من الكم ٣٤٥.٩٦٠ إلى الكم ٣٤٧.٤٦٠ بطول ١.٥ كم (بالأمر المباشر).

عقد رقم (٢٠٢٤/٢٠٢٣/١٧١٤)

رقم البند	بيان الأعمال	الوحدة	الكمية	القيمة	الإجمالي
١	أعمال الحفر				
٢-١	بالمتر المكعب أعمال حفر باستخدام المعدات الميكانيكية في التربة المتماسكة (الأراضي الزراعية) أو الأماكن ذات منسوب مياه مرتفع (طبقاً لرؤية المهندس المشرف) عدا التربة الصخرية وتسوية السطح بالأتربة التسوية والرش بالمياه الأسولية للوصول إلى نسبة الرطوبة المطلوبة والدمك الجيد بالهراست للوصول إلى أقصى كثافة جافة (95% من الكثافة الجافة القصوى) محمل على البند تحميل ونقل الأتربة الزائدة لمسافة ٥٠٠ م من محور الطريق والقلعة وتشمل عمل تشوينت وذلك باستخدام الأراضي الزراعية المجاورة لتقلل ناتج الحفر على مراحل باستخدام وسيلة النقل المناسبة لضيق أماكن المرور وذلك طبقاً لرؤية المهندس المشرف ويتم التنفيذ طبقاً للمناسيب التصميمية والقطاعات العرضية النموذجية والرسومات التفصيلية المعتمدة والبند بجميع مشتعلاته طبقاً لأصول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف. علاوة ١ جنيه إكم وتصحيح ١.١ جنيه/كلمسافة ناتج الحفر	م٣	٢٨٠٠٠	٤٣.٧٠	١,٢٢٣,٦٠٠
٣	أعمال الردم				
٢-٣	بالمتر المكعب أعمال توريد وفرش طبقة قلتر من الأحجار الصلبة المترجحة ناتج تكسير كسارات والمطابقة للمواصفات وأقصى حجم حبيبي ما بين ٢٠ مم إلى ٧٥ مم ولا يزيد نسبة الغبار من مخلل ٢٠٠ عن ٥% والتدرج الوارد بالاشتراطات الخاصة بالمشروع وهي أحجار مقاس ١ سن: ٢ سن: ٤ أو ٥ سن: ٩ بنسبة ١:١:١ والابقل معامل المرونة EV2 من تجربة لوح التحميل عن ٥٠ ميجاباسكال ولا يزيد نسبة الفقد بجهاز لوس الجولوس عن ٤٥% والقلعة تشمل أعمال التجارب المعملية والبند يشمل إجراء التجارب المعملية والحقلية طبقاً لأصول الصناعة المعمترة وتقرير الاستشاري وتعليمات المهندس المشرف. - لمسافة نقل ٢٠ كم. - القلعة شاملة قيمة المادة المحجيرة. - يتم احتساب ١.٣ جنيه لكل ١ كم بالزيادة أو التقصان.	م٣	١٦٣٠٠	٣٤٧.٢٠	٥,٦٥٩,٣٦٠
	السعر ابتداء من شهر مايو ٢٠٢٣ طبقاً للمفاوضة بتاريخ ١٨-١٢-٢٠٢٣	م٣	١٦٣٠٠	١٣٢.٦٠	٢,١٦١,٣٨٠
	علاوة بند (١-١) علاوة مسافة النقل ١٢٢ كم = ١,٣*١٠٢ = ١٣٢.٦ (1.3 * (20 - 122))	م٣	١٦٣٠٠	٢٥.٠٠	٤٠٧,٥٠٠
	علاوة تحصيل رسوم الكارثة والموازن طبقاً للوائح الشركة الوطنية	م٣	١٦٣٠٠		٩,٤٥١,٨٤٠
	الإجمالي				
	تسع ملايين وأربعمائة وواحد وخمسون ألفاً وثمانمائة وأربعون جنيهاً فقط لا غير.				
	برج العرب العلمين بطن القلعة طبقاً للمفاضلة الخاصة بالقطاع الخامس (أ) بتاريخ ١٨-١٢-٢٠٢٣				

الهيئة العامة للطرق والكباري
مدير عام المشروعات
م/ محمد حسني لياض

الهيئة العامة للطرق والكباري
مدير المشروع
م/ مارجريت مجدي

المكتب الاستشاري الهندسي أ.د. خالد قنديل
مدير المشروع
م/ السيد مصطفى الدين

الشركة المنفذة
مدير المشروع
م/ محمد حافظ عامر

رئيس الإدارة المركزية
منطقة غرب الدلتا
الاسكندرية - م/ ساسي مطروح
عميد مهندس /
"هاني محمد محمود طه"
٣/١٦

الشركة المنفذة
مدير المشروع
م/ محمد حافظ عامر
ORANGE COMPANY
EXPORT & IMPORT
٢٠١٩/١١/٢٠

IR P.L.T (10)

Contractor Company	Orange Company For Import & Export and General Contracting			Designer Company				(KK) Engineering Consulting Office			
Issued by Contractor	Name	Sign		Date/ Serial Number				Time			
	Eng: Mohamed Hafez			30-08-2024 M.I.R-010				11:00 AM			
Received by GARB CONSULTANT	Eng. Saied Saif		MIR	C1	C2	C3	DO	MM	YY	HH	MM
				346	EW	CS	01	09	24	11	00

CODE-1	S1 to S21 Station Reference	O1 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		

Description of Materials	FILTER LAYER		
Location to be Used	From St. (346+620) To St. (346+640)		
MAR Approval No	MAR (012) , MAR (013), MAR (014)	Date	10-11-2023 28-11-2023
UIR Approval No	IR (FT-010)		01-09-2024
Supplier Name	AL-Salam & AL-Howayeg		
Test Requirement	P.L.T (DIN 18134)	Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (CS21-41.2) VERSION 2 BY CIVECON GROUP.
Reference Photos	No	Other	

Item	Description	Unit	Quantity	Arrival Date	Note
1	Plate load test	NUMBER	1	02-09-2024	
2					
3					
4					

Comments by : Saied Saif (K.K)

- 1- تم اختبار القطاع Plate load test .
2- تم تحقيق النتائج المطلوبة طبقاً لمواصفات المشروع .

Comments by: Eng. Alaa Abd-Allatif (ER)

- 1-P.L.T was carried-out By (CEL).
2-Results report attached and acceptable with project specifications.
3-Final approval is subject to above mentioned comments.

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng: Mohamed Hafez		02-09-2024	A
QA/QC *	Eng. Saied Saif			A
GARB**	Eng. Margret Magdy			
Employers Representative	Eng. Alaa Abd-Allatif		2-9-2024	AWC

* Designer

** Alignment / Bridges: Culvert Only

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 (346+620 to 346+640)

Test Date : 01/09/2024

Report Date : 02/09/2024

Type of soil : fill filter

Test level : ----

Report No. : 013

Dear Gentleman,

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

Apparatus

1. Loading plates consists of two plates with 600 mm and 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 plates 600 mm and 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 2.5 kg/cm^2
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 (2nd) 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)	600
- date of measurement	01/09/2024
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

Test No.	Station	First Cycle	Second Cycle	E_{v2} / E_{v1} Ratio
		E_{v1} (MPa)	E_{v2} (MPa)	
1	346+630	77	130	1.7

Signature /  مكتب معامل الاستشارات الهندسية
 رقم التسجيل 219-991-537
 القاهرة - مصر

Company Name : Orange contraction.
Project : Electric Express Train, Al Ain Sokhna to Marea Matrouh Priority Sector (5) - Borg El Arab to El Hamam.
Test Date : 01/09/2024
report date : 02/09/2024
Location : Station 346+630
Test No. : 01

Nonrepetitive Static Plate Load Tests of Soils
DIN 18134

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	0.42	19.75	0.25	19.73	0.27	19.73	0.27	0.26
2	0.83	19.56	0.44	19.43	0.57	19.35	0.65	0.55
3	1.25	19.38	0.62	19.21	0.79	19.06	0.94	0.78
4	1.67	19.18	0.82	19.00	1.00	18.77	1.23	1.02
5	2.08	19.03	0.97	18.61	1.39	18.55	1.45	1.27
6	2.50	18.80	1.20	18.43	1.57	18.31	1.69	1.49

Unloading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	2.50	18.80	1.20	18.43	1.57	18.31	1.69	1.49
2	1.25	18.85	1.14	18.47	1.53	18.37	1.63	1.43
3	0.625	19.05	0.95	18.60	1.40	18.65	1.35	1.23
4	0.01	19.40	0.60	18.83	1.17	19.09	0.91	0.89

Loading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.42	19.38	0.62	18.80	1.20	19.00	1.00	0.94
1	0.83	19.22	0.78	18.68	1.32	18.96	1.04	1.05
2	1.25	19.08	0.92	18.45	1.55	18.82	1.18	1.22
3	1.67	18.98	1.02	18.33	1.67	18.66	1.34	1.34
4	2.08	18.91	1.09	18.20	1.80	18.54	1.46	1.45



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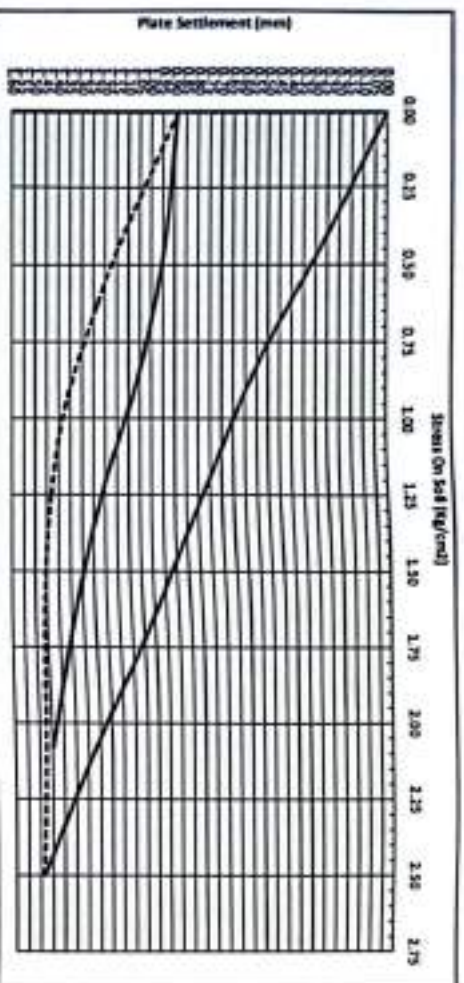
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Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

Contract Name : Orange contraction,
 Project : Electric Express Train, Al Ain Sokhna to Marra Matrouh Priority Sector (S) - Borg Al Arab to El Hamam,
 Report Date : 01/09/2024
 Report Date : 02/09/2024
 Station : Station 346+830
 Station : 01

Noncompetitive Static Plate Load Tests of Soils DIN 18134



Loading (t)	0	1	2	3	4	5	6
Stage(kg)	0	1186.92	2345.8	3532.5	4719.4	5878.1	7065
Stress (kg/cm²)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.26	0.55	0.76	1.02	1.27	1.49

Unloading (t)	1	2	3	4
Stage(kg)	7065	3533	1768	0
Stress (kg/cm²)	2.50	1.25	0.625	0.01
Settlement (mm)	1.49	1.43	1.23	0.89

D (mm) =	600	S1 (mm) =	0.56	S2 (mm) =	1.07	ΔS =	0.57
S1 (MPa) =	(0.75*0.56)/0.5		77				

Loading (2)	0	1	2	3	4	5
Stage(kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1
Stress (kg/cm²)	0.01	0.42	0.83	1.25	1.67	2.08
Settlement (mm)	0.88	0.94	1.05	1.22	1.34	1.45

Ev/Ev1 =	1.7
----------	-----

D (mm) =	600	S1 (mm) =	1.03	S2 (mm) =	1.36	ΔS =	0.34
S1 (MPa) =	(0.75*1.03)/0.5		130				

- Modulus of deformation during the loading stage.
- Modulus of deformation during the reloading stage.
- Plate diameter (mm)
- The difference between 0.5 and 0.7 from the maximum loading (mm) (kg/cm²)
- Difference in settlements corresponding to 0.5 and 0.7 from the maximum loading (mm)



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Description of Materials		FILTER LAYER			
Location to be Used		From St. (346+530) To St. (346+560)			
MAR Approval No		MAR (012) , MAR (013), MAR (014)		Date	10-11-2023
UIR Approval No		IR (FT-009)			28-11-2023
Supplier Name		AL-Salam & AL-Howayeg		01-09-2024	
Test Requirement		P.L.T (DIN 18134)	Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-41.2) VERSION 2 BY CIVECON GROUP.	
Reference Photos		No	Other		
Item	Description	Unit	Quantity	Arrival Date	Note
1	Plate load test	NUMBER	1	02-09-2024	
2					
3					
4					
Comments by : Saied Saif (K.K)			Comments by: Eng. Alaa Abd-Allatif (ER)		
١- تم إختيار القطع ٢- تم تحقيق النتائج المطلوبة طبقاً لمواصفات المشروع .			1-P.L.T was carried-out By (CEL). 2-Results report attached and acceptable with project specifications. 3-Final approval is subject to above mentioned comments.		
APPROVAL STATUS					
Organisation	Name	Sign	Date	A-AWC-R	
Contractor	Eng: Mohamed Hafez		02-09-2024	A	
QA/QC *	Eng. Saied Saif			A	
GARB**	Eng. Margret Magdy				
Employers Representative	Eng. Alaa Abd-Allatif		2-9-2024	Awc	

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 (346+530 to 346+560)**Test Date** : 01/09/2024**Repot Date** : 02/09/2024**Type of soil** : fill filter**Test level** : ----**Report No.** : 012**Dear Gentleman,**

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

Apparatus

1. Loading plates consists of two plates with 600 mm and 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 plates 600 mm and 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 2.5 kg/cm²
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 (2nd) 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)	600
- date of measurement	01/09/2024
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

Test No.	Station	First Cycle	Second Cycle	E_{v2} / E_{v1} Ratio
		E_{v1} (MPa)	E_{v2} (MPa)	
1	346+540	106	200	1.9

Signature /



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 : 01/09/2024
report date : 02/09/2024
Location : Station 346+540
Test No. : 01

Nonrepetitive Static Plate Load Tests of Soils
DIN 18134

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	0.42	19.76	0.24	19.78	0.22	19.86	0.14	0.20
2	0.83	19.51	0.49	19.57	0.43	19.65	0.35	0.42
3	1.25	19.35	0.65	19.43	0.57	19.47	0.53	0.58
4	1.67	19.20	0.80	19.25	0.75	19.26	0.74	0.76
5	2.08	19.00	1.00	19.11	0.89	19.10	0.90	0.93
6	2.50	18.81	1.19	18.90	1.10	18.96	1.04	1.11

Unloading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	2.50	18.81	1.19	18.90	1.10	18.96	1.04	1.11
2	1.25	18.89	1.11	18.98	1.02	19.03	0.97	1.03
3	0.625	18.99	1.01	19.10	0.90	19.14	0.86	0.92
4	0.01	19.31	0.69	19.36	0.64	19.38	0.62	0.65

Loading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.42	19.28	0.72	19.26	0.74	19.28	0.72	0.73
1	0.83	19.15	0.85	19.20	0.80	19.20	0.80	0.82
2	1.25	19.05	0.95	19.13	0.87	19.11	0.89	0.90
3	1.67	18.93	1.07	19.08	0.92	19.00	1.00	1.00
4	2.08	18.81	1.19	18.93	1.07	18.91	1.09	1.12



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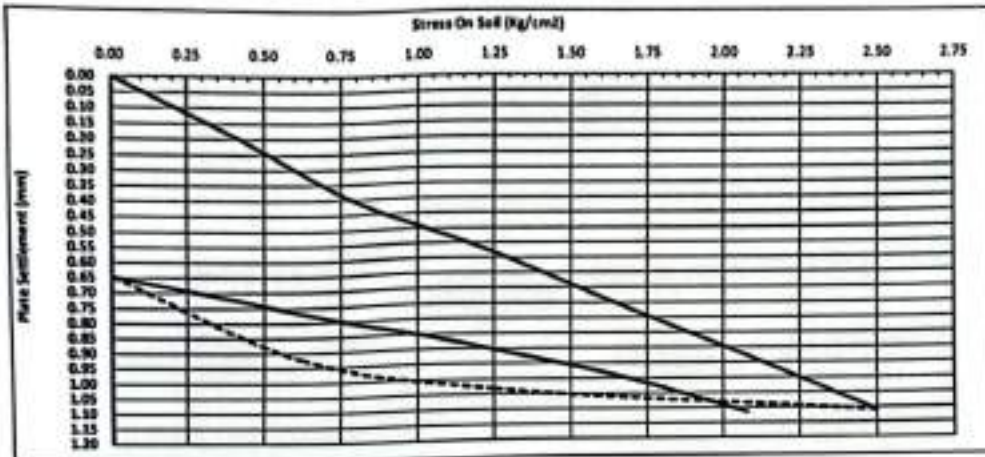


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Job Name
at
Date
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tion
No.

: Orange contraction,
: Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Sector (5) - Borg Al Arab to El Hamam.
: 01/09/2024
: 02/09/2024
: Station 346+540
: 01

Nonrepetitive Static Plate Load Tests of Soils DIN 18134



Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1	7065
Stress (Kg/cm²)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.20	0.42	0.58	0.78	0.93	1.11

UnLoading (1)	1	2	3	4
Stage(Kg)	7065	3533	1768	0
Stress (Kg/cm²)	2.50	1.25	0.625	0.01
Settlement (mm)	1.11	1.03	0.92	0.65

D (mm) =	600	S1 (mm) =	0.38	S2 (mm) =	0.80	ΔS =	0.42
Ev1 (MPa) =	(0.75 * D * Δσ) / ΔS						
	108						

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1
Stress (Kg/cm²)	0.01	0.42	0.83	1.25	1.67	2.08
Settlement (mm)	0.65	0.73	0.82	0.90	1.00	1.12

Ev2/Ev1 = 1.9

D (mm) =	600	S1 (mm) =	0.80	S2 (mm) =	1.02	ΔS =	0.22
Ev2 (MPa) =	(0.75 * D * Δσ) / ΔS						
	200						

- Modulus of deformation during the loading stage.
- Modulus of deformation during the Reloading stage.
- Plate diameter (mm)
- The difference between 0.3 and 0.7 from the maximum loading (σmax) (kg/cm²)
- Difference in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm)



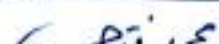
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MATERIAL INSPECTION REQUEST



Contractor Company	Orange Company For Import & Export and General Contracting			Designer Company		(KK) Engineering Consulting Office					
Issued by Contractor	Name	Sign	Date/ Serial Number		Time						
	Eng: Mohamed Hafez		16-03-2024 M.I.R-008-1		11:00 AM						
Received by GARB CONSULTANT	Eng. Saied Saif		MIR	C1	C2	C3	OD	MM	YY	HH	MM
				346	EW	C5	17	03	24	11	00

CODE - 1	51 to 521 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		

Description of Materials	FILTER LAYER		
Location to be Used	From St. (346+560) To St. (346+620)		
MAR Approval No	MAR (012) , MAR (013), MAR (014)	Date	10-11-2023 28-11-2023
UIR Approval No	IR (FT-008)		17-03-2024
Supplier Name	AL-Salam & AL-Howayeg		
Test Requirement	P.L.T (DIN 18134)	Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-41.2) VERSION 2 BY CIVECON GROUP.
Reference Photos	No	Other	

Item	Description	Unit	Quantity	Arrival Date	Note
1	Plate load test	NUMBER	1	18-03-2024	
2					
3					
4					

Comments by : Saied Saif (K.K)	Comments by: Eng. Alaa Abd-Allatif (ER)
١- تم اختبار القطاع Plate load test ٢- تم تحقيق النتائج المطلوبة طبقاً لمواصفات المشروع .	1-P.L.T was carried-out By (CEL). 2-Results report attached and acceptable with project specifications. 3-Final approval is subject to above mentioned comments.

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng: Mohamed Hafez		18-03-2024	A
QA/QC *	Eng. Saied Saif			A
GARB**	Eng. Margret Magdy			
Employers Representative	Eng. Alaa Abd-Allatif		18-3-2024	Awc

* Designing

** Alignment / Bridges: Culvert Only

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 (346+560 to 346+620)**Test Date** : 17/03/2024**Report Date** : 18/03/2024**Type of soil** : fill filter**Test level** : ----**Report No.** : 011**Dear Gentleman,**

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

Apparatus

1. Loading plates consists of two plates with 600 mm and 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 plates 600 mm and 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 2.5 kg/cm²
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 (2nd) 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)	600
- date of measurement	17/03/2024
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

Test No.	Station	First Cycle	Second Cycle	E_{v2} / E_{v1} Ratio
		E_{v1} (MPa)	E_{v2} (MPa)	
1	346+590	116	240	2.1

Signature

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219 - 931 - 637
3 شارع الملك الأفندي - الزمالة

Company Name

: Orange contraction.

Project

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

Test Date

: 17/03/2024

report date

: 18/03/2024

Location

: Station 346+590

Test No.

: 01

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
			mm	mm		mm	mm				
0	0.00	20.00	0.00		20.00	0.00		20.00	0.00		0.00
1	0.42	19.84	0.16		19.70	0.30		19.73	0.27		0.24
2	0.83	19.68	0.32		19.52	0.48		19.61	0.39		0.40
3	1.25	19.53	0.47		19.39	0.61		19.43	0.57		0.55
4	1.67	19.33	0.67		19.24	0.76		19.25	0.75		0.73
5	2.08	19.20	0.80		19.16	0.84		19.16	0.84		0.83
6	2.50	19.15	0.85		19.01	0.99		19.05	0.95		0.93

Unloading Stage (1)

Loading	Stress	Dial 1		Settlement		Dial 2		Settlement		Dial 3		Settlement		Average
	Kg/cm2				mm				mm				mm	
1	2.50	19.15		0.85		19.01		0.99		19.05		0.95		0.93
2	1.25	19.17		0.83		19.14		0.86		19.09		0.91		0.87
3	0.625	19.30		0.70		19.25		0.75		19.20		0.80		0.75
4	0.01	19.56		0.44		19.45		0.55		19.45		0.55		0.51

Loading Stage (2)

Loading	Stress	Dial 1		Settlement		Dial 2		Settlement		Dial 3		Settlement		Average
	Kg/cm2			mm				mm				mm		
0	0.42		19.50		0.50		19.40		0.60		19.40		0.60	0.57
1	0.83		19.43		0.57		19.36		0.64		19.38		0.62	0.61
2	1.25		19.33		0.67		19.28		0.72		19.29		0.71	0.70
3	1.67		19.25		0.75		19.21		0.79		19.22		0.78	0.77
4	2.08		19.18		0.82		19.16		0.84		19.15		0.85	0.84



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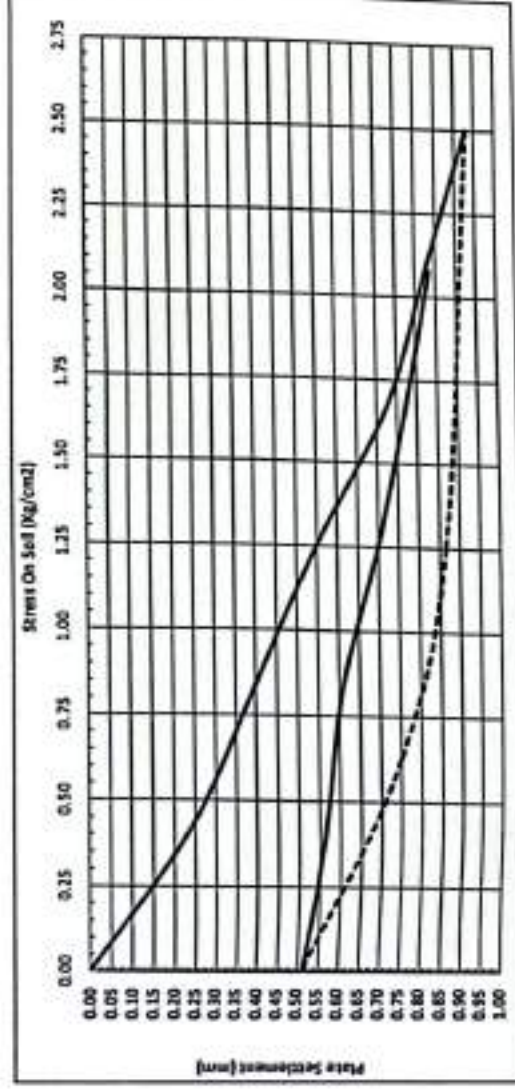


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Company Name
Project
Start Date
Report Date
Calculation
Sheet No.

: Orange contraction.
: Electric Express Train, Al Ain Sokhna to Marsa Mastroh Priority Sector (S) - Borg Al Arab to El Hamam.
: 17/03/2024
: 18/03/2024
: Station 346+590
: 01

Nonrepetitive Static Plate Load Tests of Soils DIN 18134



Loading (1)	0	1	2	3	4	5	6
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1	7065
Stress (Kg/cm2)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.24	0.40	0.55	0.73	0.83	0.93

Unloading (1)	1	2	3	4
Stage(Kg)	7065	3533	1768	0
Stress (Kg/cm2)	2.50	1.25	0.625	0.01
Settlement (mm)	0.93	0.87	0.75	0.51

$$D \text{ (mm)} = 600$$

$$S1 \text{ (mm)} = 0.37$$

$$S2 \text{ (mm)} = 0.75$$

$$\Delta S = 0.38$$

$$S1 \text{ (MPa)} = (0.75 \cdot D^2 \cdot \Delta S) / \Delta S$$

Loading (2)	0	1	2	3	4	5
Stage(Kg)	0	1186.92	2345.6	3532.5	4719.4	5878.1
Stress (Kg/cm2)	0.01	0.42	0.83	1.25	1.67	2.08
Settlement (mm)	0.51	0.57	0.61	0.70	0.77	0.84

$$D \text{ (mm)} = 600$$

$$S1 \text{ (mm)} = 0.60$$

$$S2 \text{ (mm)} = 0.79$$

$$\Delta S = 0.18$$

$$S2 \text{ (MPa)} = (0.75 \cdot D^2 \cdot \Delta S) / \Delta S$$

1. Modulus of deformation during the loading stage.
2. Modulus of deformation during the reloading stage.

3. Plate diameter (mm)

4. Time difference between 0.3 and 0.7 from the maximum loading (mm)

5. Difference in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm)

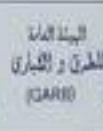


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MATERIAL INSPECTION REQUEST



Contractor Company	Orange Company For Import & Export and General Contracting		Designer Company	(KK) Engineering Consulting Office				
Issued by Contractor	Name	Sign	Date/ Serial Number		Time			
	Eng: Abdullah Kamal		26-11-2023 M.I.R-007-1		11:00 AM			
Received by GARB CONSULTANT	Eng. Saied Saif		MIR	C1	C2	C3	DO	MM
				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		

Description of Materials	FILTER LAYER		
Location to be Used	From St. (347+020) To St. (347+080)		
MAR Approval No	MAR (012)	Date	10-11-2023
UIR Approval No	IR (FT-007)		22-11-2023
Supplier Name	AL-Salam & AL-Howayeg		
Test Requirement	P.L.T (DIN 18134)	Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-41.2) VERSION 2 BY CIVECON GROUP.
Reference Photos	No	Other	

Item	Description	Unit	Quantity	Arrival Date	Note
1	Plate load test	NUMBER	1	28-11-2023	
2					
3					
4					

Comments by : Saied Saif (K.K)	Comments by: Eng. Alaa Abd-Allatif (ER)
1- تم اختيار القطع Plate load test 2- تم تحقيق النتائج المطلوبة طبقاً لمواصفات المشروع.	1-P.L.T was carried-out By (CEL). 2-Results report attached and acceptable with project specifications. 3-Final approval is subject to above mentioned comments.

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng: Abdullah Kamal			A
QA/QC *	Eng. Saied Saif			A
GARB**	Eng. Margret Magdy			
Employers Representative	Eng. Alaa Abd-Allatif		28-11-2023	AWC

* Designer

** Alignment / Bridges: Culvert Only

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

Report 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/cm²
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 (2nd) 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
- Job requirement : $E_{v2} \geq 50$ 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 No	Station	First Cycle	Second Cycle	E_{v2} / E_{v1} Ratio
		E_{v1} (MPa)	E_{v2} (MPa)	
1	347+050	68	153	2.2

Signature /




Company Name : Orange contraction
 Project : Electric Express Train, At Ain Helwan to Matruh Matruh Priority Section (B) - Burg El Arab to El Hamam
 Test Date : 27/11/2023
 report date : 28/11/2023
 Location : Station 547+050
 Test No. : 61

Nonrepetitive Static Plate Load Tests of Soils
DIN 18134

Data sheet

Loading Stage (1)

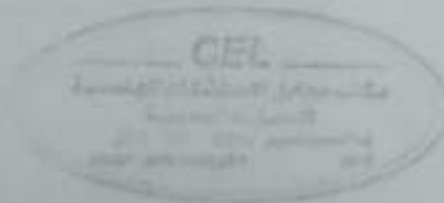
Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	0.63	19.85	0.15	19.81	0.17	19.85	0.10	0.16
2	1.67	19.67	0.33	19.61	0.39	19.73	0.29	0.34
3	2.50	19.46	0.54	19.39	0.62	19.30	0.70	0.62
4	3.33	19.26	0.72	19.21	0.89	19.32	1.08	0.90
5	4.17	19.12	0.86	19.02	1.18	19.08	1.32	1.13
6	5.00	19.04	0.96	18.94	1.40	18.94	1.56	1.33

Unloading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	5.00	19.04	0.96	18.94	1.40	18.94	1.56	1.33
2	2.50	19.08	0.92	18.90	1.40	18.99	1.51	1.28
3	1.250	19.18	0.82	18.98	1.32	19.11	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 Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.63	18.30	0.70	18.69	1.31	18.71	1.29	1.10
1	1.67	18.11	0.83	18.52	1.48	18.49	1.51	1.27
2	2.50	18.05	0.85	18.38	1.62	18.42	1.58	1.38
3	3.33	18.83	1.07	18.26	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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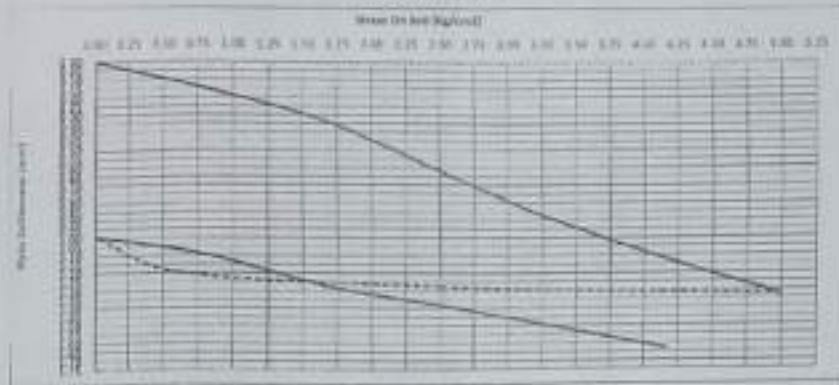


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Company Name
Project
Test Date
Report Date
Location
Test No.

Orange corporation
Electric Express Train, Al Ain Sokhna to Marsa Matruh Priority Sector (K) - Burg Al Arab to El Hamam
27/11/2023
28/11/2023
Station 347+030
21

Noncompetitive Static Plate Load Tests of Soils DIN 18134



Loading (t)	0	1	2	3	4	5	6
Stress (kg/cm²)	0	2345.54	4719.4	7065	9410.8	11784	14130
Stress (kg/cm²)	0.00	0.63	1.07	2.36	3.33	4.17	5.00
Settlement (mm)	0.00	0.15	0.34	0.62	0.80	1.13	1.33

Q (mm²) =	300	67 mm²	0.30	Q (mm²) =	64	0.54
Q (kN/m²) =	0.75 (200 kN/m²)		86			

Unloading (t)	1	2	3	4
Stress (kg)	14130	7065	1784	0
Stress (kg/cm²)	5.00	2.50	0.625	0.01
Settlement (mm)	1.33	1.28	1.20	0.86

Loading (t)	0	1	2	3	4	5
Stress (kg)	0	2345.54	4719.4	7065	9410.8	11784
Stress (kg/cm²)	0.01	0.63	1.07	2.36	3.33	4.17
Settlement (mm)	0.06	1.10	1.27	1.36	1.50	1.63

K_{SEV} = 2.2

Q (mm²) =	300	67 mm²	1.24	Q (mm²) =	64	0.28
Q (kN/m²) =	0.75 (200 kN/m²)		163			

S₁ = Modulus of settlement during the loading stage
S₂ = Modulus of settlement during the unloading stage
S₃ = Modulus of settlement
S₄ = The difference between S₂ and S₃ from the maximum loading (settle) (kg/cm²)
S₅ = The difference of settlement by unloading (S₂ and S₃ from the maximum loading (settle))

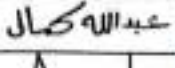


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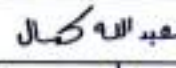
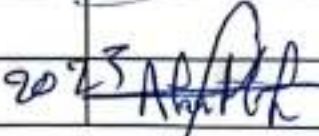
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MATERIAL APPROVAL REQUEST			إمارة القاهرة الطريق والكباري (GARB)			
	ORANGE FOR IMPORT & EXPORT AND GENERAL CONTRACTING	ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي للطرق والكباري		SVERA	SVERA	SVERA

Contractor Company	Orange For Import & Export and General Contracting			Designer Company	(KK) Engineering Consulting Office						
Issued by Contractor	Name	Sign		Date/Serial Number	Time						
	Eng. Abdullah Kamal			01/12/2023 (M.A.R-014-1)	10:00						
Received by GARB CONSULTANT	Eng. Saied Saif		MAR	C1	C2	C3	DO	MM	YY	HH	MM
				345	EW	C5	2	12	23	10	0

CODE 1	S1 to S21	D1 to S3	Kp XXX Note
CODE 2	Station Reference	Depot Reference	For Kilometer point only Start Km is used
CODE 3	Work Activity		
CODE 4	Sub Element of Activity		

Description of Materials	Crushed Dolomitic Aggregates For Filter Layer		
Location to be Used	From Station (345+960) to Station (347+460)		
Sample only	Yes	Materials Type	Crushed Dolomitic Aggregates For Filter Layer
Supplier Name	AL-Salam & AL-Howayeg	Data Sheet provided	Yes attached
Reference in BoQ		Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (CG2L-41.2) VERSION 2 BY CIVECON GROUP
Prequalification reference		Test Samples Results	
Reference Photos	No	Other	
Comments by: Eng. Saied Saif (K.K)		Comments by: Eng. Alaa Abd-Allatif (ER)	
1-Quality test Result By Third Party Laboratory is Approved.		1-All tests were carried-out by Third Party Lab (CEL).	
2-This Sample Representative (5000 m3) only.		2-Results report attached and acceptable with the project specifications.	
		3-Final approval is subject to above mentioned comments.	

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Abdullah Kamal			A
QA/QC *	Eng. Saied Saif			A
GARB**	Eng. Margret Magdy			
Employers Representative	Eng. Alaa Abd-Allatif		2023/12/13	AWC

* Designer

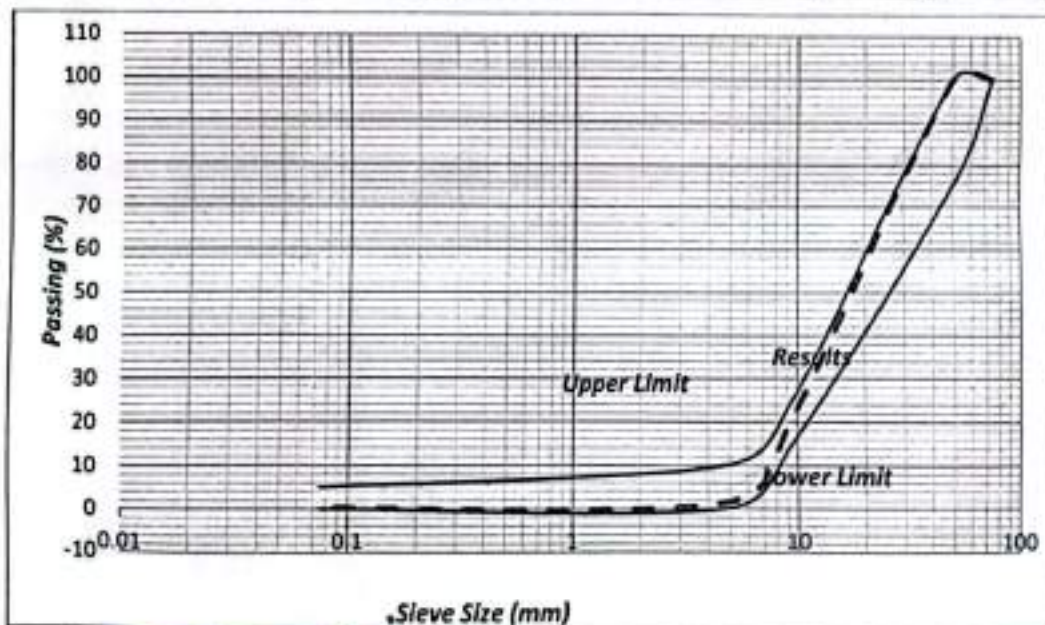
** Alignment/Bridges: Culvert only

13/12

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 345+960 to 347+460
Type of sample : Water Backfill
Delivery Date : 02/12/2023
Reporting Date : 10/12/2023
Reporting No. : 004
Sample No. : 01

Results of sieve analysis according to ASTM D-422.

Sieve Size (mm)	Passing %	Job specification limits (ASTM D-422)	
		Min.	Max.
75	100	100	100
50	100	75	100
10	21.0	15	25
4.75	1.4	0	10
0.075	0.2	0	5



The test results are (☒ Comply - ☐ Not Comply) with specifications limits.

Signature

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Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 345+960 to 347+460
Type of sample : Water Backfill
Delivery Date : 02/12/2023
Reporting Date : 10/12/2023
Reporting No. : 004
Sample No. : 01

**Materials finer than 75 μ m (no.200) sieve
by washing ASTM D-1140.**

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	0.1

Signature 

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 345+960 to 347+460
Type of sample : Water Backfill
Delivery Date : 02/12/2023
Reporting Date : 10/12/2023
Reporting No. : 004
Sample No. : 01

Results of Specific Gravity and Absorption
of Course Aggregate
ASTM C127 & D 6473

Test	Results
Bulk Specific Gravity (OD)	2.59
Bulk Specific Gravity (SSD)	2.64
Apparent Specific Gravity.	2.73
Absorption %	1.99

Note:

- (OD) Refer to Oven Dry.
- (SSD) Refer to Saturated Surface Dry.

Signature: 

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 345+960 to 347+460
Type of sample : Water Backfill
Delivery Date : 02/12/2023
Reporting Date : 10/12/2023
Reporting No. : 004
Sample No. : 01

RESISTANCE TO DEGRADATION
OF SMALL SIZE AGGREGATE BY ABRASION
AND IMPACT IN LOS ANGELES MACHINE
ASTM C-131

Test	Results
Amount of loss by abrasion and impact (%) Coarse aggregate	31.5

- According to Project Specs:
The amount of loss by abrasion and impact for moderate weathering
- Shall not exceed 45% (when Subjected to 500 revolutions)

The test results is (☒ Comply ☐ Not Comply) with specifications limits.

Signature

CEL
مكتب معامل الاستشارات الهندسية
الساحل الشمالي/02

Company : Orange
Project : Electric express train.
Delivery Date : 09/12/2023
Report Date : 13/12/2023
Sample Id : Fill filter (345+960:347+460)
Report No. : 001

ACID-SOLUBLE CHLORIDE AND SULFATE IN SOIL SAMPLE

Test	Results
Total acid soluble chloride %	0.0354
Total acid soluble Sulfate %	0.0449
Organic impurities %	Nil

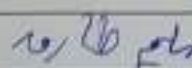
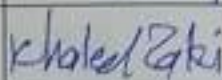
Signature /



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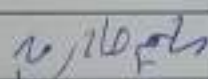
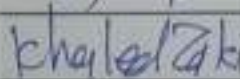
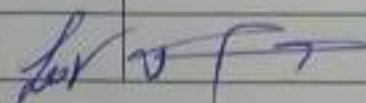


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Contractor Company	Orange For Import & Export and General Contracting			Designer Company				(JOK) Engineering Consulting Office			
Issued by Contractor	Name	Sign		Date/Serial Number				Time			
	Eng. Abdullah Kamal			11/9/2023				10:00			
	(M.A.R-013-1)										
Received by GARB CONSULTANT	Eng. Saled Saif		MAR	C1 C2 C3	00	MM	YY	HH	MM		
				345	EW	CS	10	11	23	10	0

CODE 1	S1 to S23	D1 to S3	Kp XXX Note
	Station Reference	Depot Reference	For Kilometer point only Start Km is used
CODE 2	Work Activity		
CODE 3	Sub Element of Activity		

Description of Materials	Crushed Dolomitic Aggregates For Filter Layer		
Location to be Used	From Station (345+960) to Station (347+460)		
Sample only	Yes	Materials Type	Crushed Dolomitic Aggregates For Filter Layer
Supplier Name	AL-Safam & AL-Howayeg	Data Sheet provided	Yes attached
Reference in BoQ		Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (CG21-41.3) VERSION 2 BY CIVECON GROUP
Pregualification reference		Test Samples Results	
Reference Photos	No	Other	
Comments by: Eng. Saled Saif (K.K)		Comments by: Eng. Alaa Abd-Allatif (ER)	
1-Quality test Result By Third Party Laboratory is Approved.		1-All tests were carried-out by Third Party Lab (CEL).	
2-This Sample Representative (3000 m3) only.		2-Results report attached and acceptable with the project specifications.	
		3-Final approval is subject to above mentioned comments	
		4-Remaining chemical test	

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Abdullah Kamal			A
QA/QC *	Eng. Saled Saif			A
GARB**	Eng. Margret Mugdy			
Employers Representative	Eng. Alaa Abd-Allatif		28-11-2023	AWC

* Designer

** Alignment/Bridges: Civil only

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 28-11-2023
Reporting No. : 003
Sample No. : 03

Dear Gentleman,

Attached here with the Water Backfill delivered on 10-11-2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according ASTM D-1140.
3. Specific Gravity & Absorption according to ASTM C-127 & D 6473.
4. Los Anglos according to ASTM C-131.
5. Organic Content according to ASTM D-2974.

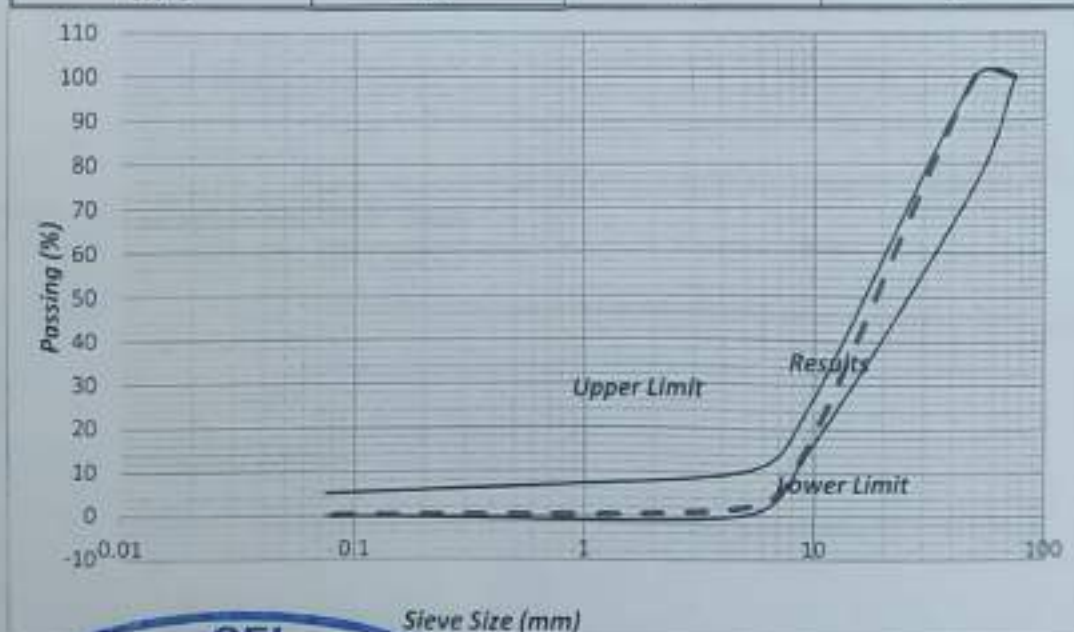
Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken.

Signature The stamp is an oval shape with the word 'CEL' at the top. Below it, in Arabic, is 'مكتب معامل الاستشارات الهندسية'. In the center, there is a signature and the text 'الساحيل الهندسية 02'. At the bottom, it says 'التم التوقيع: محمد النور - المهندس'.

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 28-11-2023
Reporting No. : 003
Sample No. : 03

Results of sieve analysis according to ASTM D-422.

Sieve Size (mm)	Passing %	Job specification limits (ASTM D-422)	
		Min.	Max.
75	100	100	100
50	100	75	100
10	16.4	15	25
4.75	1.8	0	10
0.075	0.1	0	5



CEL
مكتب معامل الاستشارات الهندسية

The test results ☒ Comply - ☐ Not Comply) with specifications limits.

Signature

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 28-11-2023
Reporting No. : 003
Sample No. : 03

**Materials finer than 75 μ m (no.200) sieve
by washing ASTM D-1140.**

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	0.1


مكتب معامل الاستشارات الهندسية
الساحل الشمالي 02
المقر الرئيسي : شبراخيت - الدقهلية - مصر

Signature _____

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 28-11-2023
Reporting No. : 002
Sample No. : 02

Results of Specific Gravity and Absorption
of Course Aggregate
ASTM C127 & D 6473

Test	Results
Bulk Specific Gravity (OD)	2.57
Bulk Specific Gravity (SSD)	2.59
Apparent Specific Gravity.	2.62
Absorption %	0.76

Note:

- (OD) Refer to Oven Dry.
- (SSD) Refer to Saturated Surface Dry.

Signature 
مكتب معامل الاستشارات الهندسية
العا حبل الشما لسنن 02
شركة الترسو * شركة الملك الأفضل للإنشاء والتعمير

3 El Malek El Afdal Street
Zamalek, Cairo.
Tel. & Fax : 27367231 - 27363093

IAS
ACCREDITED

ش الملك الأفضل
الزمالك - القاهرة
تليفون + فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 28-11-2023
Reporting No. : 001
Sample No. : 01

RESISTANCE TO DEGRADATION
OF SMALL SIZE AGGREGATE BY ABRASION
AND IMPACT IN LOS ANGELES MACHINE
ASTM C-131

Test	Results
Amount of loss by abrasion and impact (%) Coarse aggregate	29.3

- According to Project Specs:
The amount of loss by abrasion and impact for moderate weathering
- Shall not exceed 45% (when Subjected to 500 revolutions)

The test results is (~~Not~~ **Comply**) with specifications limits.

Signature

CEL
المعامل الهندسية
02
د. محمد أحمد محمد

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 30-11-2023
Reporting No. : 003
Sample No. : 03

Organic of Soil ASTM D-2974
Method Type D

Test	Results
Amount of organic content %	Nil

Signature / 

CEL
مكتب معامل الاستشارات الهندسية
الساحل الشمالي 02
الرقم الرئيسي: ٩ شراشة الأفق - برج التحرير



COMIBASSAL International Controllers

Internal inspection and laboratories sector

Accredited by : Egyptian General Authority for Petroleum under No. 34/29-11-2011

Report	:	903 - 3 - Center
Date	:	02/12/2023

CHEMICAL ANALYSIS

General Consultant	:	SYSTRA
Consultant	:	DR/ Khaid Kandil
Contractor	:	شركة اورتاج للاستشارات والتصميم والمقاولات المدنية
Project	:	Electric express train
Sample	:	Coarse Aggregate Filter Layer
Station	:	ST (345 + 960) : (347 + 460)
Date of Test	:	2/12/2023
Temperature	:	24 °C
Humidity	:	50%

ANALYSIS	RESULTS	METHOD REFERENCE
CHLORIDE (CL)	0.0016%	ASTM D 2974
SULPHATE (SO ₃)	0.0036%	
ORGANIC MATTER	NEGATIVE	

LAB DIRECTOR
CH/ Mostafa Asker



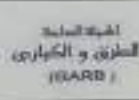
Mostafa

10 23 Alexandria - Cairo Desert Road - Merghem
t: 002 03 4704595 - 002 034701191
ail : civdept@comibassal.com
bSite : www.comibassal.com



49 El Horria Ave. Alex, Egypt
Tel: 002 033920176 - 002 033931482
Fax : 002 033900476
Email : internal-inspection@comibassal.com

MATERIAL APPROVAL REQUEST



Contractor Company	Orange For Import & Export and General Contracting		Designer Company	(KK) Engineering Consulting Office				
Issued by Contractor	Name	Sign	Date/Serial Number		Time			
	Eng. Abdullah Kamal	<i>Abdullah Kamal</i>	11/9/2023 (M.A.R-012-3)		10:00			
Received by GARB CONSULTANT	Eng. Saied Saif	<i>Chaled Zaki</i>	MAR	☒	☒	☒	☒	☒
				345	EW	CS	10	11

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

Description of Materials	Crushed Dolomitic Aggregates For Filter Layer		
Location to be Used	From Station (345+960) to Station (347+460)		
Sample only	Yes	Materials Type	Crushed Dolomitic Aggregates For Filter Layer
Supplier Name	AL-Salam & AL-Howayeg	Data Sheet provided	Yes attached
Reference in BoQ		Specification	EARTHWORK SPECIFICATIONS & TESTING REPORT (CS21-RL2) VERSION 2 BY CIVECON GROUP
Prequalification reference		Test Samples Results	
Reference Photos	No	Other	
Comments by: Eng. Saied Saif (K.K)		Comments by: Eng. Alaa Abd-Allatif (ER)	
1-Quality test Result By Third Party Laboratory is Approved.		1-All tests were carried-out by Third Party Lab (CEL).	
2-This Sample Representative (5000 m3) only.		2-Results report attached and acceptable with the project specifications.	
		3-Final approval is subject to above mentioned comments.	
		4-Remaining chemical tests	

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng. Abdullah Kamal	<i>Abdullah Kamal</i>		A
QA/QC *	Eng. Saied Saif	<i>Chaled Zaki</i>		A
GARB**	Eng. Margret Magdy			
Employers Representative	Eng. Alaa Abd-Allatif	<i>Alaa Abd-Allatif</i>	28-11-2023	AWC

* Designer

** Alignment/Bridges: Client only

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 28-11-2023
Reporting No. : 002
Sample No. : 02

Dear Gentleman,

Attached here with the Water Backfill delivered on 10-11-2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according ASTM D-1140.
3. Specific Gravity & Absorption according to ASTM C-127 & D 6473.
4. Los Anglos according to ASTM C-131.
5. Organic Content according to ASTM D-2974.

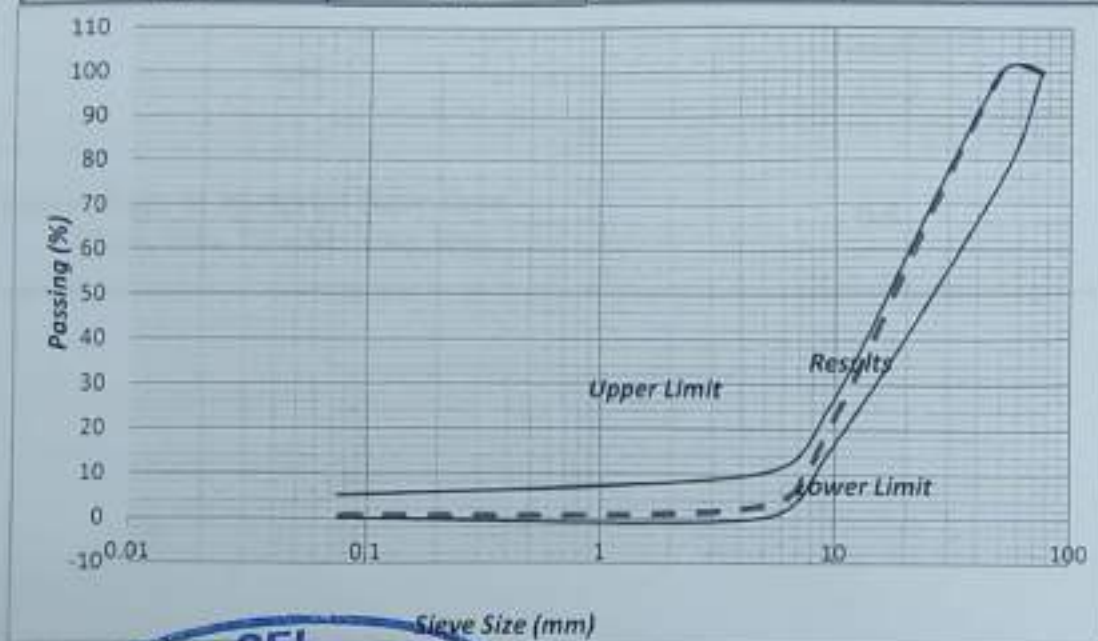
Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken.

Signature 

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 28-11-2023
Reporting No. : 002
Sample No. : 02

Results of sieve analysis according to ASTM D-422.

Sieve Size (mm)	Passing %	Job specification limits (ASTM D-422)	
		Min.	Max.
75	100	100	100
50	100	75	100
10	20.4	15	25
4.75	2.6	0	10
0.075	0.5	0	5



The test results are ☒ Comply - ☐ Not Comply) with specifications limits.

Signature

CEL
مكتب معامل الاستشارات الهندسية
02

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 28-11-2023
Reporting No. : 002
Sample No. : 02

Materials finer than 75 μ m (no.200) sieve
by washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	0.5

Signature 

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 28-11-2023
Reporting No. : 002
Sample No. : 02

Results of Specific Gravity and Absorption
of Course Aggregate
ASTM C127 & D 6473

Test	Results
Bulk Specific Gravity (OD)	2.68
Bulk Specific Gravity (SSD)	2.70
Apparent Specific Gravity.	2.74
Absorption %	0.80

Note:

- (OD) Refer to Oven Dry.
- (SSD) Refer to Saturated Surface Dry.

Signature /  **CEL**
مكتب معامل الاستشارات الهندسية
الساحل الشمالي
البريد الإلكتروني: cel@cel.gov.eg

4

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 28-11-2023
Reporting No. : 002
Sample No. : 02

RESISTANCE TO DEGRADATION
OF SMALL SIZE AGGREGATE BY ABRASION
AND IMPACT IN LOS ANGELES MACHINE
ASTM C-131

Test	Results
Amount of loss by abrasion and impact (%) Coarse aggregate	27.9

- According to Project Specs:
The amount of loss by abrasion and impact for moderate weathering
- Shall not exceed 45% (when Subjected to 500 revolutions)

The test results is (~~Not Comply~~) with specifications limits.

Signature

المناحل الشبلي
02

Company Name : Orange Company
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. 347+460
Type of sample : Water Backfill
Delivery Date : 10-11-2023
Reporting Date : 30-11-2023
Reporting No. : 002
Sample No. : 02

Organic of Soil ASTM D-2974

Method Type D

Test	Results
Amount of organic content %	Nil

CEL
مكتب معامل الاستشارات الهندسية
Signature /

CEL
مكتب معامل الاستشارات الهندسية
الساحل الشمالي 02
القاهرة - شارع الملك الأفندي - برج 1



COMIBASSAL International Controllers

Internal inspection and laboratories sector

Accredited by : Egypt General Authority for Petroleum under No. 34/29-11-2011

Report	:	903 - 2 - Center
Date	:	02/12/2023

CHEMICAL ANALYSIS

General Consultant	:	SYSTRA
Consultant	:	DR/ Khaled Kandil
Contractor	:	شركة اورنج للاستشارات والتصدير والمقاولات العامة
Project	:	Electric express train
Sample	:	Coarse Aggregate Filter Layer
Station	:	ST (345 + 960) : (347 + 460)
Date of Test	:	2/12/2023
Temperature	:	24 °C
		Humidity : 50%

ANALYSIS	RESULTS	METHOD REFERENCE
CHLORIDE (CL)	0.0017%	ASTM D 2974
SULPHATE (SO3)	0.0042%	
ORGANIG MATTER	NEGATIVE	

LAB DIRECTOR
CH/ Mostafa Asker

Mostafa



10 23 Alexandria - Cairo Desert Road - Merghem
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