

مشروع القطار الكهربائي فالق السرعة قطاع (العلمين ، قوكة) المقايسة التقديرية لينود الإعمال تنفيذ المؤسسة المصرية المتحدة اتجاه التهيمة القطاع من المحطة 476+600 الي 477+600

قر الهند	المال الأعمل	Fingle	الكمية	Lie	الاجمالي
7	اعمل افرام				
1.7	احسان تنميل و تتروية و نقل تترية مطبقة المراصفات و تضفيلها باستخدم الان قدموية بسمله لا يتريه عن ٥٠ سم على متسوب - احش و بسمت الرارية عن ١٥ سم استقبال المتسوب التصنيعي للتنفيل طبيس و الانتفاق (سمة تعمل المبلورية الانتفاق من ١٥٠) الرشايا بالمبلوة الأصوبان في نسبة الرطوية السطورية و السنة الجود بالهراسات الرصوبات القسيم المنفرة و الرسومات تضفيلية المنشدة و اشتفاق المبلورية مشتماته وطبق المساملة و مواصفات الهيئة النطبة القضان و الكياري و المنبذي المبلكس الشار قدر المساملة المنافق منطقة المنافق المنافقة المبلك المنسان السعر يشمل حيل التعربية طبقا الافتا المنطقة البناة القطاع (١) من قتم ١٠٠ في التم ١٠٠١.	3,	27,961.36	85	2,376,718
	عادراً مسطة هال ١١٢ لم	3,	27,961.36	295.40	8,259,785
	علاوة لمصيل رسوم الفارتة والموازين طبقا للالعة القرانة الوطنية	3,	27,961.36	13	363,498
	الإجمالي				11,000,000

مدير المشروع المقاول م / محمود شاویش

محضر استلام موقع

مشروع: أعمال الجسر الترابي لمسار القطار الكهرباني السريع الخط الأول (العين السخنة - مطروح) قطاع (العمين/فوكة) لتنفيذ المسافة من الكم 476+600 الى الكم 477+600 بطول 1 كم إتجاه الضبعة

تنفيذ: شركة المؤسسة المصرية المتحدة اشركة المنطقة الخامسة منطقة غرب الدلتا طبقاً للعقد رقم (2024/2023/255) بتاريخ 2023/8/22 ابنه في يوم الثلاثاء الموافق 2023/08/27 اجتمع كل من:-

مدير عام مشروعات - الهينة العامة للطرق والكباري

1- السيد المهندس /مجد حستى قياض

مدير مشروع - الهينة العامة للطرق والكبارى

2- السيد المهندس /إبراهيم عبد الله الحناوي

مدير مشروع شركة المؤسسة المصرية المتحدة

3- السيد المهندس/ محمود شاويش

وذلك للمرور على مسار العملية المذكورة عاليه لاستلام الموقع:وقد تبين أن الموقع خالياً من العوائق الظاهرية ويسمح بالبدء في التنفيذ وبناء عليه يعتبر
تاريخ 2023/08/26 هو تاريخ استلام الموقع وبدء الأعمال بالعملية
واقفل المحضر على ذلك ووقع الحضور

التوقيعات

3- معود شاول س

-1

رئيس الإدارة الركزية

منطقة غرب الدلتا

الاسكندرية - مراسسي مطروح

عميد . مهندسي

مانی محمد محمود طه"

MATERIAL INSPECTION REQUEST Contractor Company Issued by Contractor

Gri









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Company	United Egypt	ion Foundation	Des	signer (ompa	ny				
Issued by	Name	Sign n	-				SGA	C		
Contractor	Mahmoud Shawish		Dat				Time			
Received by		1	1	5.8.	21					
ER		M	R C1	(7	C3	DD	ММ	YY	нн	MI

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escription of Manager	Sub Element of Activity	

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				_	ri	II material	results		
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INSPECTION REQUEST











Contractor Company	United Egypti	ion Fo	undati	ion	Des	igner C	ompa	ny	SGA		017	
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Contractor	Mahmoud Shawiesh	1			1	9.8	. 2.		- 12			
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Page 1 of 1



Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (477+000)

Delivery Date : 09/08/2022 Reporting Date : 15/08/2022

Reporting No. : 29 Sample No. : 26

Dear Gentleman,

Attached here with the Soil Replacement delivered on 09/08/2022

Materials test

1. Sieve analysis according to ASTM D-422.

2. Material finer than sieve No. 200 according to ASTM D-1140.

3. Liquid limits and plasticity index of soil according to ASTM D-4318.

4. Soil classification according to Project Specs.

5. Proctor test according to ASTM D-1557.

6. CBR according to ASTM D-1883.

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

Signature /....

در عبد دورس : 2 شوع ۱۹۵۰ ۱۹۵۰ - کارت - شامع



Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (477+000)

Delivery Date : 09/08/2022 Reporting Date : 15/08/2022

Reporting No. : 29 Sample No. : 26

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Results of Sieve Analysis According to ASTM D-422.

Sieve Size (mm)	Passing %
50	98.5
37.5	92.7
25	84.1
19	73.7
12.50	61.8
9.50	56.8
4.75	51.2
2.36	48.1
2.00	43.4
1.18	40.8
0.600	33.9
0.425	28.9
0.300	21.5
0.150	15.1

Signature /....

3 El Maick El Afdal Street Zamalek, Cairo.





Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (477+000)
Delivery Date : 09/08/2022

Reporting Date : 15/08/2022

Reporting No. : 29 Sample No. : 26

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μΜ (No.200)	13.4

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3 El Malek El Afdal Street Zamalek, Cairo.

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Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (477+000)

Delivery Date : 09/08/2022

Reporting Date : 15/08/2022

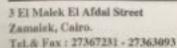
Reporting No. : 29 Sample No. : 26

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Results of liquid limit and plasticity index of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	25.8
Plastic Limit	19.7
Plasticity Index	6.1







anpany Name : EGYPTIAN UNITED GROUP

eroject : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (477+000)

Delivery Date : 09/08/2022 Reporting Date : 15/08/2022

Reporting No. : 29 Sample No. : 26

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Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	100000000000000000000000000000000000000	its accordin rojects Specs	g
Group Classification	(A-2-4)*	(A-1-a)	(A-1-b)	(A-2-4)*
2.00 mm (No.10).	43.4	Max 50 %		
	28.9	Max 30 %	Max 50 %	
0.425 mm (No. 40). 0.075 mm (No. 200).	13.4	Max 15 %	Max 15 %	Max 15 %
Characteristics of fraction pa	ssing 0,425 mm (N	(0.40)	111	
Liquid Limit	25.8			
Plasticity index	6.1	Max 6 %	Max 6 %	Max 10 %

* Only allowed in lower embankment

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

Signature

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3 El Malek El Afdal Street Zamalek, Cairo.



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Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

Company Name : EGYPTIAN UNITED GROUP

eroject : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (477+000)

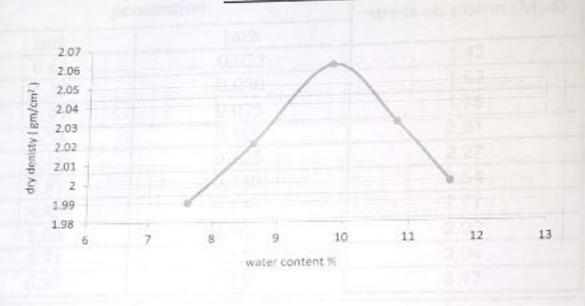
Delivery Date : 09/08/2022 Reporting Date : 15/08/2022

Reporting No. : 29 Sample No. : 26

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(1)

Moisture – Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



Max dry density (gm/cm²) : 2.06

Optimum moisture content % : 9.8

مكتب معلى الاستشارات البنسية المعلجل الشمالي

Signature /

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



6



onipany Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh project

Type of sample : Soil Replacement (Embankment)

Location : St. (477+000)

Delivery Date : 09/08/2022 Reporting Date : 15/08/2022

Reporting No. : 29 Sample No. : 26

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Test Results of California Bearing Ratio on Base Materials ASTM D 1883

stress on piston (Mpa)	etration	per	
1.42	Inch	mm	
1.53	0.025	0.64	
	0.050	1.27	
1.75	0.075	1.91	
2.01	0.100	2.54	
2.27	0.125	3.18	
2.54	0.150	3.81	
2.77	0.175		
2.92	0.200	4.45	
3.04	0.225	5.08	
3.17	0.250	5.71	
Acceptance of the	0.180	6.35	

		40,000 (20)
St	CBR %	
St. Value	Sample results	29.11
6.90	2.01	
		301

Notes:

Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of 2.06 (gm/cm3)

at 9.8% optimum water content.

Signature

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Tel.& Fax: 27367231 - 27363093



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Scanned with CamScanner

Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

spe of sample : Soil Replacement (Embankment)

Location : St. (477+000)

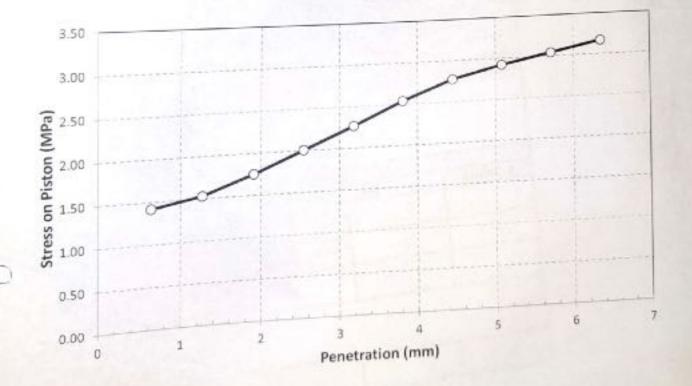
Delivery Date : 09/08/2022

Reporting Date : 15/08/2022

Reporting No. : 29 Sample No. : 26

No

Load Penetration Curve of CBR Test ASTM D-1883



Signature / B. Signature / Signature /

3 El Malek El Afdal Street Zamalek, Cairo. IAS

۴ ش العلك الأفضل الزمائك - القاهرة تليفون + هاكس : ۲۷۳۲۷۲۴۱ - ۲۷۳۲۳۰۹۳ www.cel-egypt.com

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Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+700)
Delivery Date : 13/08/2022

Reporting Date : 19/08/2022

Reporting No. : 30 Sample No. : 27

Dear Gentleman,

Attached here with the Soil Replacement delivered on 13/08/2022

Materials test

Sieve analysis according to ASTM D-422.

- 2. Material finer than sieve No. 200 according to ASTM D-1140.
- 3. Liquid limits and plasticity index of soil according to ASTM D-4318.
- 4. Soil classification according to Project Specs.
- 5. Proctor test according to ASTM D-1557.

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

Signature /...

Lun-and Sunacensi --



Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+700)

Delivery Date : 13/08/2022 Reporting Date : 19/08/2022

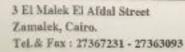
Reporting No. : 30 Sample No. : 27

Results of Sieve Analysis According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	91.4
25	83.4
19	70.6
12.50	61.3
9.50	50.8
4.75	43.5
2.36	40.8
2.00	38.1
1.18	34.9
0,600	26.8
0.425	23.3
0.300	18.9
CEL 0.150	13.8

Signature /...

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Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+700)

Delivery Date : 13/08/2022 Reporting Date : 19/08/2022

Reporting No. : 30 Sample No. : 27

(T)

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

Linear Tamic Test	Results (%)
Percentage of material finer than Sieve Size 75 μΜ (No.200)	9.3



3



Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+700)

Delivery Date : 13/08/2022

Reporting Date : 19/08/2022

Reporting No. : 30 Sample No. : 27

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Results of liquid limit and plasticity index of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	26.7
Plastic Limit	18.6
Plasticity Index	8.1

Signature /.....

3 El Malek El Afdal Street Zamalek, Cairo.





: EGYPTIAN UNITED GROUP

apany Name : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

project type of sample : Soil Replacement (Embankment)

Location : St. (476+700)

Delivery Date : 13/08/2022

Reporting Date : 19/08/2022

Reporting No. : 30 Sample No. : 27

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs					
Group Classification	(A-2-4)*	(A-1-a)	(A-1-b)	(A-2-4)*			
	38.1	Max 50 %					
2.00 mm (No.10).	23.3	Max 30 %	Max 50 %				
0.425 mm (No. 40). 0.075 mm (No. 200).	9.3	Max 15 %	Max 15 %	Max 15 %			
Characteristics of fraction pa	ssing 0.425 mm (N	(o.40)					
Liquid Limit	26.7						
Plasticity index	8.1	Max 6 %	Max 6 %	Max 10 %			

^{*} Only allowed in lower embankment

The test results are (

Comply - □ Not Comply) with specifications limits

3 El Malek El Aldal Street

Zamalek, Cairo.

Tel.& Fax: 27367231 - 27363093



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: EGYPTIAN UNITED GROUP pany Name

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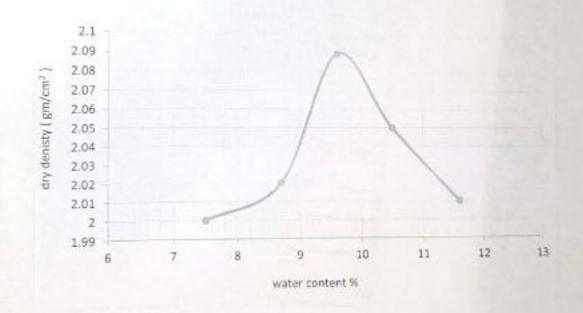
: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh : Soil Replacement (Embankment) type of sample

Location : St. (476+700)

Delivery Date : 13/08/2022 Reporting Date : 19/08/2022

Reporting No. : 30 Sample No. : 27

Moisture - Density relation of soil Test result (Modified proctor test) ASTM D-1557



Max dry density (gm/cm2) : 2.09

Optimum moisture content % : 9.6

Signatur

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Zamalek, Cairo.













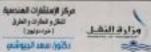
Contractor Company United Egy			Foundation			Designer Company				2422				
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MATERIAL INSPECTION REQUEST











Contractor Company	United Egypti	ion Foundati	n Foundation Designer Com			ompa	any SGAC				
Issued by	Name	Sign AS		Date			Time				
Contractor	Mahmoud Shawlesh	The state of the s		27	7.9	. 2	.72				
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CODE - 3		5	ub Element of								
Description of N	faterials		Fill	materi	al resu	lts					

Desci	ription of Materials			- 1	Fill material	results	IT I HE
Location to be Used		1-From station47 2-From station47 3-From station47 4-From station47 5-From station47	76+300 t 76+080 t 76+000 t	to statio to statio to statio	n 476+540 n 476+200 n 476+080	(-3) (-2.5)	
MAR	Approval No					Date	
Suppl	ier Name						
Test R	lequirement		Specification		ition	Clause	
Refere	ence Photos	Yes attached / No		Other			
Item	Description		Unit	Quantity /		A-1-10	T and the same of
1	CBR		m3		10000	Arrival Date	Note
Comm	ents by:			Cor	nments by:		
to	ole has been taken (CEL) lab and contions and accep		et the				
)rgani	sation Name		Sign	VAL STAT	US		
ontra	and the second	Kamel Shehab		ant	7	Date	A-AWC-R
M/QC *		Lanal		+	2/		
ARB*		ng/ Mostafa Negrn	17	1	14		
omme	ent by ER						
mplay	ers entative						

File: MIR - 10000 m3

Page 1 of 1



Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+640)

Delivery Date : 21/09/2022

Reporting Date : 27/09/2022

Reporting No. : 51 Sample No. : 20

Dear Gentleman,

Attached here with the Soil Replacement delivered on 21/09/2022

Materials test

- Sieve analysis according to ASTM D-422.
- 2. Material finer than sieve No. 200 according to ASTM D-1140.
- 3. Liquid limits and plasticity index of soil according to ASTM D-4318.
- 4. Soil classification according to Project Specs.
- 5. Proctor test according to ASTM D-1557.
- 6. CBR according to ASTM D-1883.

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

السالم الاستشارات الونسسية Signa ure / السالم الا والشطالي / Signa ure / المسالم الا والشطالي / در مسال المسالم الا والمسالم المسالم المس

3 El Malek El Afdal Street Zamulek, Cairo.





Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+640)
Delivery Date : 21/09/2022
Reporting Date : 27/09/2022

Reporting No. : 51 Sample No. : 20

Results of Sieve Analysis According to ASTM D-422.

Sieve Size (mm)	Passing %		
50	100		
37.5	88.9		
25	79.1		
19	72.7		
12.50	66.3		
9.50	58.4		
4.75	38.7		
2.36	37.2		
2.00	35.8		
1.18	31.1		
0.600	29.4		
0.425	28.5		
0.300	23.5		
0.150	17.1		

Signature /.

معلى الاستثنار الدينيية الهنسية الم

ئم مسجل فنديس: 337 - 240 - 240 - 240 نبر الا الرئيس : 3 شارع المالة الاطناء - 21 مالا

2

3 El Malek El Afdal Street Zamalek, Cairo.





Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+640)
Delivery Date : 21/09/2022

Reporting Date : 27/09/2022

Reporting No. : 51 Sample No. : 20

1

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μΜ (No.200)	11.6

ماتب معلى الورتشر بداده المسية المالية المسيد المس

3





Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+640)
Delivery Date : 21/09/2022
Reporting Date : 27/09/2022

Reporting No. : 51 Sample No. : 20

1

Results of liquid limit and plasticity index of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

Signature / المعلمة التوانسية المعلمة التوانسية التوانس

3 El Malek El Afdal Street Zamalek, Cairo.





Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+640)

Delivery Date : 21/09/2022

Reporting Date : 27/09/2022

Reporting No. : 51 Sample No. : 20

Rec

scar

dfi

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs			
Group Classification	A-1-a	(A-1-a)	(A-1-b)		
2.00 mm (No.10).	35.8	Max 50 %			
0.425 mm (No. 40).	28.5	Max 30 %	Max 50 %		
0.075 mm (No. 200).	11.6	Max 15 %	Max 15 %		
Characteristics of fraction passing 0.4	25 mm (No.40 NP)			
lasticity index	NP	Max 6 %	Max 6 %		

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

Signature

السمالهال الشيطاني رم صبيل مدرس: 137 - 240 - 240 صريز دريس : 3 شع الت الأفان - الراك

1

3 El Malek El Afdal Street Zamalek, Cairo.





Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

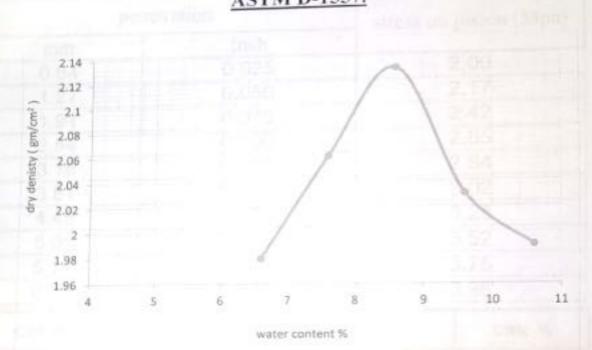
Location : St. (476+640)

Delivery Date : 21/09/2022

Reporting Date : 27/09/2022

Reporting No. : 51 Sample No. : 20

Moisture – Density relation of soil
Test result (Modified proctor test)
ASTM D-1557.



Max dry density (gm/cm²) : 2.13

• Optimum moisture content % : 8.6

Signature

مكتب معلى الاستشارات الكندسوة البجائيل الكشاك دام دسيد دنيس 127 - 100 -

-

_ CEL

Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+640)

Delivery Date : 21/09/2022

Reporting Date : 27/09/2022

Reporting No. : 51 Sample No. : 20

Test Results of California Bearing Ratio on Base Materials ASTM D 1883

pe	netration	stress on piston (Mpa)
mm	Inch	suces on piston (wpa)
0.64	0.025	2.00
1.27	0.050	2.17
1.91	0.075	2.42
2.54	0.100	2.55
3.18	0.125	2.84
3.81	0.150	3.02
4.45	0.175	3.25
5.08	0.200	3.52
5.71	0.225	3.75
6.35	0.250	3.98

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm)	St. Value	Sample results	
penetration	6.90	2.55	36.9

Notes:

Oi

Attached graph shows penetration resistance versus penetration magnitude.

The sample was compacted to dry density of 2.13 (gm/cm³) at 8.6 % optiming system content.

3- Surcharge loaded to Kighan

3 El Malek El Afdal Street Zamalek, Cairo,



: EGYPTIAN UNITED GROUP impany Name project

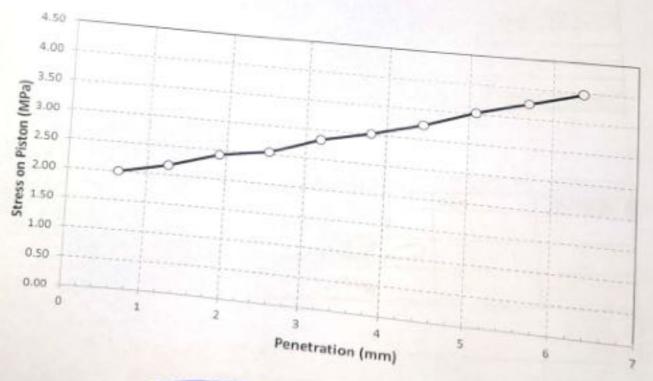
: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Type of sample : Soil Replacement (Embankment) Location

: St. (476+640)

Delivery Date : 21/09/2022 Reporting Date : 27/09/2022 Reporting No.

: 51 Sample No. : 20

Load Penetration Curve of CBR Test ASTM D-1883



Signature













Contractor Company	United Egypti	ion Foundation		n	Designer Company			ny	SGAC			
Issued by	Name	Sign	100	,	Date				Time			
Contractor	Mahmoud Shawish				17	10	.70	22				
Received by ER				MIR	CL	a	а	DD	MM	YY	HH	ММ
				617						ov to a		

C00E-1	S1 to S21 Station Reference	D1 to 53 Depot Reference	Kp XXX Nate For Kilometer point only Start Km is used
CODE-2		Work Activity	The residence of the second se
CODE -3		Sub Element of Activity	

Descri	iption of Ma	aterials			-	ill material	res	sults		
Locati	ion to be Us	sed	1-From station475 2-From station476				57.55			
MAR	Approval N	0						Date		
Suppl	ier Name									
Test F	Requiremen	it			Spe	ecification		Clause		
Refer	ence Photo	5	Yes attached / No	1	Oth	ner				
Item	Description	n		Uni	t	Quantity	A	rrival Date	ival Date Note	
1	LL & P.L 8	O.M.C	%	m3		5000			11000	
2	Proctor			m3		5000	-			
3	Classificat	tion		m3	ii .	5000				
4	Seive ana	lysis		m3		5000				
Comr	ments by:					Comments b	y:			
to		ab and ti	orm fill material by SG. he results founded me ed							
				APPR	OVA	STATUS				
Organ	nisation	Name		Si	gn			Date		A-AWC-R
Contr	ractor		Kamel Shehab	1	an	1				
QA/O)C *	1	Lamel	1	120					
GARE	3**	En	g/ Mostafa Negm		,	tuy				
Comn	nent by ER									BA I
10000070	oyers esentative									

File: MIR - 5000 m3

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Page 1 of 1

ATERIAL الفریدات الفوق و التامال INSPECTION REQUEST Designer Company Contractor **SGAC** United Egyption Foundation Company Time Date Name Issued by Contractor Mahmoud Shawlesh Received by MIR ER Kp XXX Rote D1 to 53 CODE-1 51 to 521 Depot Reference For Kilometer point only Start Kim is used Station Reference Work Activity **Sub Element of Activity** CODE-1 Fill material results Description of Materials 1-From station475+900 to station 476+000 (-2) 2-From station476+000 to station 476+080 (-2) 3-From station476+200 to station 476+320 (-2.5) Location to be Used 3-From station476+900 to station 476+000 (-1.75) 4-From station475+740 to station 476+880 (-5) 5-From station476+540 to station 476+660 (-4 MAR Approval No Date Supplier Name Test Requirement Specification Clause Reference Photos Yes attached / No Other Item Description Unit Quantity Arrival Date CBR m3 10000 Comments by:

Asample has been taken form fill material by SGAC office to (CEL) lab and the results founded meet the specificontions and accepted

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Kamel Shehab	Kan >		
QA/QC*	Hamel	121		
GAR8**	Eng/ Mostafa Negm	Cy		
Comment by ER				
Employers Representative				

APPROVAL STATUS

Comments by:

File: MIR - 10000 m3

15/



: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh : EGYPTIAN UNITED GROUP Company Name

Project

: Soil Replacement (Embankment) Type of sample

: St. (475+540) Location : 11/10/2022 Delivery Date

: 17/10/2022 Reporting Date

: 53 Reporting No. : 22 Sample No.

Dear Gentleman,

Attached here with the Soil Replacement delivered on 11/10/2022

Materials test

- Sieve analysis according to ASTM D-422.
- Material finer than sieve No. 200 according to ASTM D-1140.
- Liquid limits and plasticity index of soil according to ASTM D-4318.
- 4. Soil classification according to Project Specs.
- Proctor test according to ASTM D-1557.
- CBR according to ASTM D-1883.

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

Signature /

3 El Malek El Afdul Street Zamalek, Cairo.





Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (475+540)
Delivery Date : 11/10/2022

Reporting Date : 17/10/2022

Reporting No. : 53 Sample No. : 22

Results of Sieve Analysis According to ASTM D-422.

Sieve Size (mm)	Passing %		
50	100		
37.5	92,8		
25	81.9		
19	76.8		
12.50	72.1		
9.50	64.6		
4.75	43.8		
2.36	41.2		
2.00	40.8		
1.18	37.6		
0.600	33.2		
0.425	31.7		
0.300	24.4		
0.150	19.1		

مقتب معلىل الإستشارات الهلامية

Signature / January 1937

3 El Malek El Afdal Street Zamalek, Cairo.





Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (475+540)

Delivery Date : 11/10/2022

Reporting Date : 17/10/2022

Reporting No. : 53 Sample No. : 22

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μΜ (No.200)	12.9

Signature /

مئتب معلى الاستشرات الهنسوة

تر تنسيدل فشريبي: 427 - 401 - 210 - 210 مريخ الزاميس : 2 شفوع شاك الاختال - الأملاك - المقاعرة

3

3 El Malek El Afdal Street Zamalek, Cairo.



Annial Cities in

Consulting Engineering Bureau & Laboratories مكتب معامل الاستشارات الهندسية

Company Name : EGYPTIAN UNITED GROUP

Project

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Type of sample

: Soil Replacement (Embankment) Location : St. (475+540)

Delivery Date : 11/10/2022 Reporting Date : 17/10/2022

Reporting No. : 53 Sample No. : 22

Results of liquid limit and plasticity index of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

Signature



Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (475+540)

Delivery Date : 11/10/2022

Reporting Date : 17/10/2022

Reporting No. : 53 Sample No. : 22

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	2012m-0	Limits according Projects Specs		
Group Classification	A-1-b	(A-1-a)	(A-1-b)		
2.00 mm (No.10).	40.8	Max 50 %	******		
0.425 mm (No. 40).	31.7	Max 30 %	Max 50 %		
0.075 mm (No. 200).	12.9	Max 15 %	Max 15 %		
Characteristics of fraction passing 0.4	25 mm (No.40))			
Liquid Limit	NP	10	<u> </u>		
Plasticity index	NP	Max 6 %	Max 6 %		

The test results are (Comply - Dot Comply) with specifications limits

معتب معامل الإستشارات الهلاسية السياحل الشمالي

Signature

IAS



Company Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

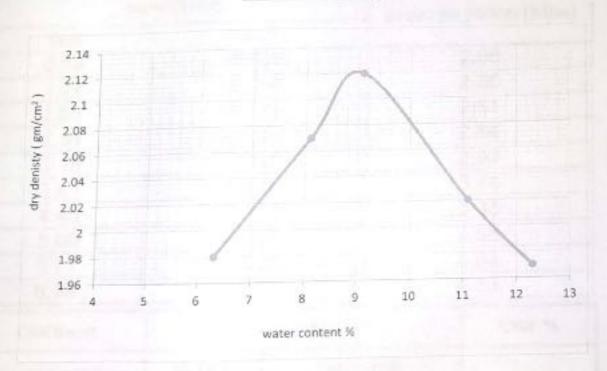
Location : St. (475+540)

Delivery Date : 11/10/2022

Reporting Date : 17/10/2022

Reporting No. : 53 Sample No. : 22

Moisture – Density relation of soil Test result (Modified proctor test) ASTM D-1557.



Max dry density (gm/cm²) : 2.12

Optimum moisture content % : 9.1

مكتب معامل الاستشارات الونعسوة السماحل الشمالي

Signature /

داد مسجد هندست: 257- 100-100 وقد عندس : 3 همار معصور المعادد

3 El Malek El Afdal Street Zamalek, Cairo.

Tel.& Fax: 27367231 - 27363093



6



Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (475+540)

Delivery Date : 11/10/2022

Reporting Date : 17/10/2022

Reporting No. : 53 Sample No. : 22

Test Results of California Bearing Ratio on Base Materials ASTM D 1883

per	netration	stress on piston (Mpa)
mm	Inch	suces on piston (wipa)
0.64	0.025	2.08
1.27	0.050	2.30
1.91	0.075	2.51
2.54	0.100	2.84
3.18	0.125	2.96
3.81	0.150	3.14
4.45	0.175	3.38
5.08	0.200	3.58
5.71	0.225	3.83
6.35	0.250	4.13

CBR Result	CBR %			
t 0.1 inch (2.54 mm) penetration	St. Value			
penetration	6.90	2.84	41.1	

tes:

1- Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of 2.12 (gm/cm³) at 9.1% optimum water content.

3- Sarcharge load 4.50 Kg

nature

م صدر مدرس: 377 - 200 - 219 مرود و219 مرود تروس : 3 مرود الم المسالم المرود و

-7

Il Malek El Afdal Street malek, Cairo.

& Fax: 27367231 - 27363093





Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

spe of sample : Soil Replacement (Embankment)

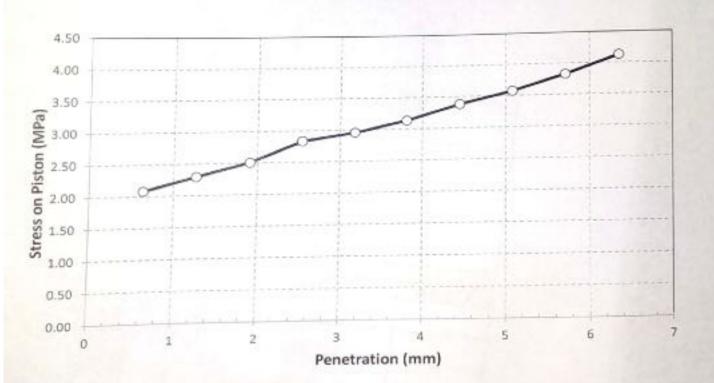
St. (475+540)

pelivery Date : 11/10/2022

Reporting Date : 17/10/2022

Reporting No. : 53 Sample No. : 22

Load Penetration Curve of CBR Test ASTM D-1883



8

3 El Malek El Afdal Street Zamalek, Cairo.



-MATERIAL INSPECTION REQUEST





مرکز الاستشارات المنصور تنظر و شارت و شرق (شرب بیلین) (گالوا) دهند الجنوشنان





Contractor Company	United Egypt	tion Foundation			Designer Company				SGAC			
Issued by Name	Name	Sign	10	-	Date				Time	2		
	Mahmoud Shawish		K		6.	11-	2	22				
Received by ER	- man			MIR	C1	CZ.	C3	DD	ММ	YY	нн	MM

COBE-1	51 to 521 Station Reference	D1 to 53 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2		Work Activity	
CODE - 3		Sub Element of Activity	

De	scription of Materials	Fill material results						
Loca	ation to be Used	1-From station4 2-From station4 3-From station4	76+640) to sta	tion 476+740	(-4)		
MAF	R Approval No					Date		
Supp	olier Name							
Test	Requirement			Speci	fication	Clause		
Refer	rence Photos	Yes attached / No		Other				
tem	Description		Unit	t	Quantity	Arrival Date	Note	
1	LL& P.L & O.M.C %		m3		5000			
2	Proctor		m3		5000	40.0		
	Classification		m3		5000			
	Seive analysis		m3		5000			

Comments by: Comments by:

Asample has been taken form fill material by SGAC office o (CEL) lab and the results founded meet the pecificontions and accepted

		APPROVAL STATUS		
rganisation	Name	Sign	Date	A-AWC-R
ontractor	Kamel Shehab	Kam -		
VQC *	Ramel	ARR	0	1 19
RB**	Eng/ Mostafa Negm	1 Ciny		
nment by ER				
ployers resentative				

fiR - 5000 m3

Page 1 of 1



Company Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Project

: Soil Replacement (Embankment) Type of sample

: St. (476+000) Location

: 01/11/2022 **Delivery Date** : 06/11/2022 Reporting Date

: 54 Reporting No. : 23 Sample No.

Dear Gentleman,

Attached here with the Soil Replacement delivered on 01/11/2022

Materials test

1. Sieve analysis according to ASTM D-422.

Material finer than sieve No. 200 according to ASTM D-1140.

- Liquid limits and plasticity index of soil according to ASTM D-4318.
- 4. Soil classification according to Project Specs.
- Proctor test according to ASTM D-1557.

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

> CEL مكتب معامل الاستثمارات الهندسية المساحل الشسالي

Signature

3 El Mulek El Afdal Street Zamalek, Cairo.





Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+000)
Delivery Date : 01/11/2022

Reporting Date : 06/11/2022

Reporting No. : 54 Sample No. : 23

Results of Sieve Analysis According to ASTM D-422.

Sieve Size (mm)	Passing %
	100
37.5	96.6
25	83.7
19	70.6
12.50	62.9
9.50	59.1
4.75	40
2.36	38.2
2.00	37.3
1.18	33.7
0.600	30.9
0.425	29.1
0,300	25.8
0.150	19.3

Signature /

معتب معضل الاستشرات الهنسسية المسلطى الشيمالي رغ صور فعريف 1994 - 1994 عليه رضور تدييس : 5 فوج الملك الإثنان - الواكل - طلك

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





Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+000)

Delivery Date : 01/11/2022

Reporting Date : 06/11/2022

Reporting No. : 54 Sample No. : 23

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μΜ (No.200)	11.8

معتب معلى الإستشرات الهنسية المعتبر معلى المعتبر المع

3



Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+000)

Delivery Date : 01/11/2022

Reporting Date : 06/11/2022

Reporting No. : 54 Sample No. : 23

Results of liquid limit and plasticity index of soils according to ASTM D-4318

	The state of the s	
Test	Results (%)	1
Liquid Limit	NP	
Plastic Limit	NP	
Plasticity Index	NP	

معتب معامل الإسطاعيات الهندسية المساهل الشوائي ... / Dature ... معامل المساهل الشوائي / 375-350 معامل معامل المساهل الم

Malek El Afdal Street alek, Cairo.

k Fax: 27367231 - 27363093



4

۳ ش الملك الأفضل الزمالك - القاهرة تليفون + فاكس ، ۲۷۳۱۷۲۳۱ - ۲۷۳۱۳۰۹۳ www.cel-egypt.com



Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+000)

Delivery Date : 01/11/2022 Reporting Date : 06/11/2022

Reporting No. : 54 Sample No. : 23

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs			
Group Classification	A-1-a	(A-1-a)	(A-1-b)		
2.00 mm (No.10).	37.3	Max 50 %			
0.425 mm (No. 40).	29.1	Max 30 %	Max 50 %		
0.075 mm (No. 200).	11.8	Max 15 %	Max 15 %		

Characteristics of fraction passing 0.425 mm (No.40)

Liquid Limit	NP	PHENNE	
Plasticity index	NP	Max 6 %	Max 6 %

The test results are (∠ Comply - □ Not Comply) with specifications limits

مكتب معلىل الاستشارات الونعيد السماحل الشمالي

A 40 - 601 - 937 : 400 - 918

nature /

Malek El Afdal Street

miek, Cairo. & Fax : 27367231 - 27363093



۳ ش الملك الأفضل الزمالك - القاهرة تليفون + فاكس ، ۲۷۳۹۷۲۳۱ - ۲۷۳۹۲۲۳۱ تليفون + فاكس ، ۳ww.cel-egypt.com



: EGYPTIAN UNITED GROUP any Name

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

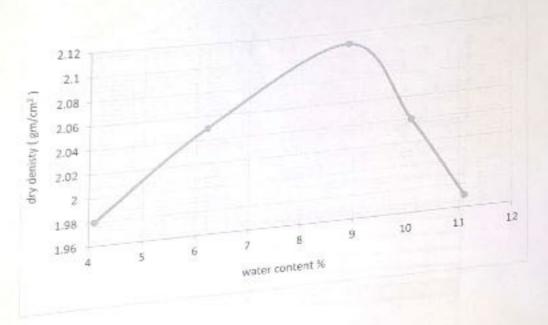
of sample : Soil Replacement (Embankment)

: St. (476+000) ocation

pelivery Date : 01/11/2022 geporting Date : 06/11/2022

Reporting No. : 54 Sample No. : 23

Moisture - Density relation of soil Test result (Modified proctor test) ASTM D-1557



: 2.11 Max dry density (gm/cm2)

: 8.9 Optimum moisture content %

Signature

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



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Contractor Company	United Egyption Foundation			Designer Company				SGAC			
Issued by	Name	Sign	-	Date				Time			
Contractor	sued by		n-	6	.11.	20	1)				
Received by ER			MIR	CI	E2	C3	00	MM	YY	НН	MM

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			Fill material results							
Local	ion to be Used	1-From station47 2-From station47								
MAR	Approval No					Date				
Suppl	ier Name									
Test F	Requirement			Specific	ation	Claus	e			
Refer	ence Photos	Yes attached / No		Other						
Item	em Description		Unit		Quantity	Arrival D	ate	Note		
1	LL& P.L& O.M.	C %	m3		5000					
2	Proctor		m3		5000					
3	Classification		m3		5000					
4	Seive analysis		m3		5000					
Comm	ents by:		Comments by:							
to			eet the		****					
Oceani	sation Name		APPROV	ALSIA	105	Da			A-AWC-R	
Organi	sation Name		Sign		_	Da	te		A-AWL-N	
Contra	ctor	Kamel Shehab	K	land		>				
QA/QC		Zanel	1	+	21	2				
SARB*	• En	g/ Mostafa Negm	(My					
omme	nt by ER									
mploy	ers									

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Page 1 of 1

MATERIAL INSPECTION REQUEST











Contractor Company	1	United Egyption Foundation			Designer Company			SGAC					
Issued by	Name		Sign	6	1	Date	9			Time			
Contractor	Mahmo	oud Shawlesh		D		6	11.	7:7	-7				
Received by ER					MIR	CI	a	C3	00	MM	VY.	HH	MM
CODE-1		S1 to S21 Station Reference			D1 to S Depot Refer Work Activ	ence		fo	Kilome	Kp X	XX Note t only St		is used
CODE - 3				Su	b Element of	and the same of	_						
Description of M	laterials				Fill	nater	ial resu	ilts					
		1. From stati	on47	6+880 to	station 4	76+98	80 (-5)						

Description of Materials			Fill material results						
Location to be Used			1-From station476+880 to station 476+980 (-5) 2-From station476+640 to station 476+740 (-4) 3-From station476+000 to station 476+100 (-1.75) 4-From station476+740 to station 476+860 (-4.5) 5-From station476+300 to station 476+540 (-2)						
MAR	Approval N	lo					Date		
Suppl	lier Name								
Test F	Requiremen	rt			Specifica	stion	Clause		
Refere	ence Photo	s	Yes attached / No		Other				
Item Description			Unit		Quantity	Arrival Date	Note		
1				m3 10000					
	-								
				-					
Comm	ents by:				Con	nments by:			
to	(CEL) la contions ar	ab and the	rm fill material by SG e results founded me d	AC office eet the		iie.			
				Sign	ALSIAI	US	Date	A-AWC-R	
Organis	sation	Name		Ka	u				
Contrac	ctor	K	amel Shehab	pa	~	No o			
QA/QC		+	Lonal	+	+	3/	2		
ARB**		Eng/	Mostafa Negm	1	/	My			
omme	nt by ER								
				-					

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Page 1 of 1



Consulting Engineering But مكتب معامل الإستشارات الهندسية

Company Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Project

Type of sample : Soil Replacement (Embankment)

: 06/11/2022

Location : St. (476+300) Delivery Date : 01/11/2022 Reporting Date

Reporting No. : 55 Sample No. : 24

Dear Gentleman,

Attached here with the Soil Replacement delivered on 01/11/2022

Materials test

1. Sieve analysis according to ASTM D-422.

- Material finer than sieve No. 200 according to ASTM D-1140.
- Liquid limits and plasticity index of soil according to ASTM D-4318.
- 4. Soil classification according to Project Specs.
- Proctor test according to ASTM D-1557.
- CBR according to ASTM D-1883.

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

Signature /

مكتب معضل الاستشارات الهلد

والراس : و غاوم صله العداء - الرحه - عالم



Company Name : EGYPTIAN UNITED GROUP : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Project : Soil Replacement (Embankment) Type of sample

: St. (476+300) Location

: 01/11/2022 Delivery Date : 06/11/2022 Reporting Date

Reporting No. : 55 : 24 Sample No.

Results of Sieve Analysis According to ASTM D-422.

Sieve Size	Passing %
(mm)	100
50	88.2
37.5	81.7
25	72.7
19	
12.50	65.3
9,50	61.1
4.75	41.6
	41.2
2.36	38.8
2.00	36.5
1.18	32.9
0.600	30.2
0.425	24.1
0.300	
0.150	17.6

Signature

On

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





Company Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Project

: Soil Replacement (Embankment) Type of sample

: St. (476+300) Location

: 01/11/2022 **Delivery Date** : 06/11/2022 Reporting Date

: 55 Reporting No. : 24 Sample No.

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

	Hymility
Test	Results (%)
	57
Percentage of material finer than Sieve Size 75 μΜ (No.200)	12.3

Signature

iont



Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+300)

Delivery Date : 01/11/2022 Reporting Date : 06/11/2022

Reporting No. : 55 Sample No. : 24

Results of liquid limit and plasticity index of soils according to ASTM D-4318

Chadliferine Test	1.10	Results (%)	
Liquid Limit	30.1	NP	Alay S
Plastic Limit	162.0	NP	
Plasticity Index	2 425 Inn (750.5)	NP	

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3 El Malek El Afdal Street Zamalek, Cairo.





: EGYPTIAN UNITED GROUP Company Name

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Project

: Soil Replacement (Embankment) Type of sample

: St. (476+300) Location

Delivery Date : 01/11/2022 : 06/11/2022 Reporting Date

Reporting No. : 55 : 24 Sample No.

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs			
Group Classification	A-1-b	(A-1-a)	(A-1-b)		
2.00 mm (No.10).	38.1	Max 50 %	*****		
0.425 mm (No. 40).	30.2	Max 30 %	Max 50 %		
0.075 mm (No. 200).	12.3	Max 15 % Max 15			
Characteristics of fraction passing 0.4	125 mm (No.40))			
Liquid Limit	NP				
Plasticity index	NP	Max 6 %	Max 6 %		

The test results are (Comply - Not Comply) with specifications limits CEL

Signature /

الساحل الشمال

مكتب معامل الاستضارات الهلدم

3 El Malek El Afdal Street Zamalck, Cairo.





ompany Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

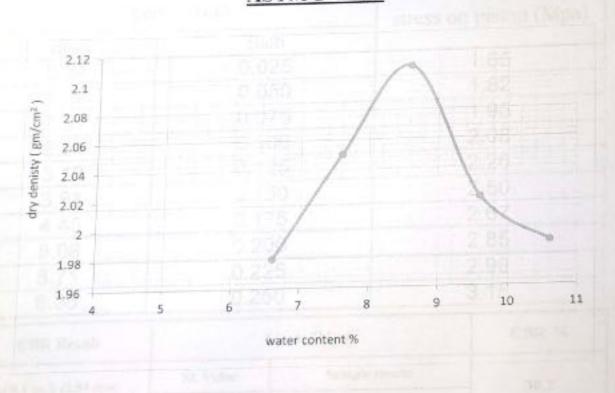
Type of sample : Soil Replacement (Embankment)

Location : St. (476+300)

Delivery Date : 01/11/2022 Reporting Date : 06/11/2022

Reporting No. : 55 Sample No. : 24

Moisture – Density relation of soil
Test result (Modified proctor test)
ASTM D-1557.



Max dry density (gm/cm²) ; 2.11

• Optimum moisture content % : 8.6

Signature

معنى معلى الاستشعرات البندسية السماحل الشمالين دام عسماد المدين المالية المحاكمة

CEL

6

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مكتب معامل الإستشارات الهندسية

Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment) Location

: St. (476+300) **Delivery Date** : 01/11/2022

Reporting Date : 06/11/2022

Reporting No. : 55 Sample No. : 24

Test Results of California Bearing Ratio on Base Materials **ASTM D 1883**

pen	etration	stress on piston (Mp		
mm	Inch	Shess on Pisses (Signal		
0.64	0.025	1.65		
1.27	0.050	1.82		
1.91	0.075	1.95		
2.54	0.100	2.08		
3.18	0.125	2.26		
3.81	0.150	2.50		
4.45	0.175	2.67		
5.08	0.200	2.85		
5.71	0.225	2.98		
6.35	0.250	3.15		

CBR Result	St	CBR %	
At 0.1 inch (2.54 mm)	St. Value	Sample results	30.2
penetration	6.90	2.08	30.2

tes:

Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was Compacted to dry density of 2.11 (gm/cm³) at 8.6 % optimum water content.

3- Surcharge load 4.50

gnature

El Malek El Afdal Street Zamalek, Cairo.





: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh : EGYPTIAN UNITED GROUP Company Name

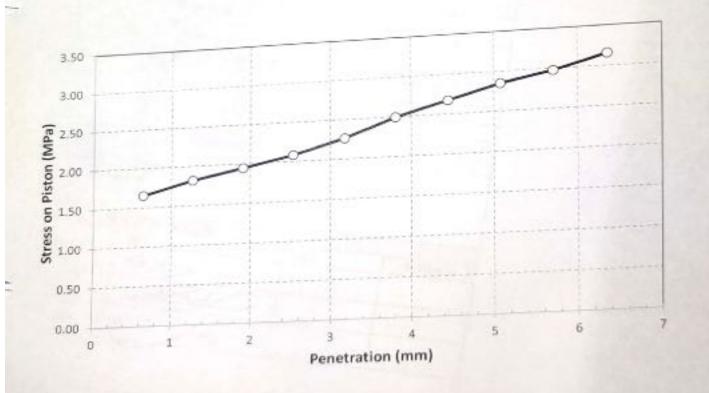
Project

: Soil Replacement (Embankment) Type of sample

: St. (476+300) Location : 01/11/2022 Delivery Date : 06/11/2022 Reporting Date

: 55 Reporting No. : 24 Sample No.

Load Penetration Curve of CBR Test ASTM D-1883



Signature



MATERIAL INSPECTION











Contractor Company	United Egypt	United Egyption Foundation		Des	igner (ompa	any	SGA			
Issued by Contractor	Name	Sign MS		Date			Time				
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ER			MIR			250	111111111		"	НН	MM
CODE-1				_					_		

CODE-1 S1 to 521	D1 to S3	
CODE = 2 Station Reference	Depot Reference	Enr Kilomete
COOF-3	Work Activity	For Kilometer point only Start Km is used
The state of the s	Sub Element of Activity	The state of the s

De	scription of Materia	als		Fill	material	results	
Loca	ation to be Used	1-From station4 2-From station4	177+840 to 176+980 to	o station o station	478+000 (477+100 (-4) -5)	
MAF	R Approval No			- 10			
Supp	olier Name					Date	
Test	Requirement		5	Specifica	ition	Clause	
Refer	rence Photos	Yes attached / N		Charles In		Clause	
Item	Description	- Countained / N	277	Other			
1	LL&PL&O.M.	- 0/	Unit		Quantity	Arrival Date	Note
2	Proctor	- 70	m3		5000		14000
3	Classification		m3		5000		
4	Seive analysis		m3		5000		
Comm	nents by:		m3	-	5000 ments by:		
-	(CEL) lab and to contions and accept	orm fill material by 5G he results founded me ed	AC office eet the				
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Page 1 of 1

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Page 1 of 1

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Consulting Engineering I مكتب معامل الإستشارات الهندسية

Company Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Project

Type of sample : Soil Replacement (Embankment)

Location : St. (476+980) **Delivery Date** : 17/11/2022 Reporting Date : 23/11/2022

Reporting No. : 57 Sample No. : 26

Dear Gentleman,

Attached here with the Soil Replacement delivered on 17/11/2022

Materials test

1. Sieve analysis according to ASTM D-422.

2. Material finer than sieve No. 200 according to ASTM D-1140.

3. Liquid limits and plasticity index of soil according to ASTM D-4318.

4. Soil classification according to Project Specs.

Proctor test according to ASTM D-1557.

CBR according to ASTM D-1883.

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

مكاتب معامل الإستشارات المله

Signature /

3 El Malek El Afdal Street Zamaiek, Cairo.





Company Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Project

: Soil Replacement (Embankment) Type of sample

: St. (476+980) Location : 17/11/2022 **Delivery Date** : 23/11/2022 Reporting Date

Reporting No. : 57 : 26 Sample No.

Results of Sieve Analysis According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	95.1
25	86.3
19	76.2
12.50	71.4
9.50	63.2
4.75	45.8
2.36	43.3
2.00	39.7
1.18	34.1
0.600	32.5
0.425	31.2
0.300	25.1
0.150	18.4

Signature

CEL مكتب معشل الإستشغرات الهذ

الله و المراج الله الافتال - الإسلام - الله

3 El Malek El Afdal Street Zamalek, Cairo.





Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+980)

Delivery Date : 17/11/2022 Reporting Date : 23/11/2022

Reporting No. : 57 Sample No. : 26

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μΜ (No.200)	12.4

Signature/.

مكتب معلى الاستهاري المناسط المساحل المشعالي داره مد ودرس ۱۵۷ - ۱۵۹ - ۱۵۹ شود ودرس : ۵ شوع شده الاشن - الاردي - المار

CHEL

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Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+980)

Delivery Date : 17/11/2022

Reporting Date : 23/11/2022

Reporting No. : 57 Sample No. : 26

Results of liquid limit and plasticity index of soils according to ASTM D-4318

		11888	
Test	A-1-0	Results (%)	
Liquid Limit	31.2	NP	Min
Plastic Limit	11.4	NP	Mai
Plasticity Index	E-FET HU LYON	NP	

Signature

مكتب معلىل الاستشارات الهندسية السماحل الزئيموالي

در صدر فلرس : 8 فاع شده الاست الدي - علم

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

IAS ACCREDITED



Consulting Engineering Bureau & Laboratories

مكتب معامل الإستشارات الهندسية Company Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Type of sample : Soil Replacement (Embankment)

Location

: St. (476+980) **Delivery Date** : 17/11/2022 Reporting Date : 23/11/2022

Reporting No. : 57 Sample No. : 26

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)		ecording ts Specs
Group Classification	А-1-ь	(A-1-a)	(A-1-b)
2.00 mm (No.10).	39.7	Max 50 %	
0.425 mm (No. 40).	31.2	Max 30 %	Max 50 %
0.075 mm (No. 200).	12.4	Max 15 %	Max 15 %
Characteristics of fraction passing 0.4	125 mm (No.40))	
Liquid Limit	NP	*****	******
Plasticity index	NP	Max 6 %	Max 6 %

The test results are (a Comply | Not Comply) with specifications limits مكتب سعشال الإنستشارات

Signature

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Tel.& Fax: 27367231 - 27363093



٣ ش العلك الأفضل الزمالك - القاهرة تليفون - فاكس ، ۲۲۲۲۲۲۱ - ۲۲۲۲۰۹۲ www.cel-egypt.com



مكتب معامل الإستشارات الهندسية

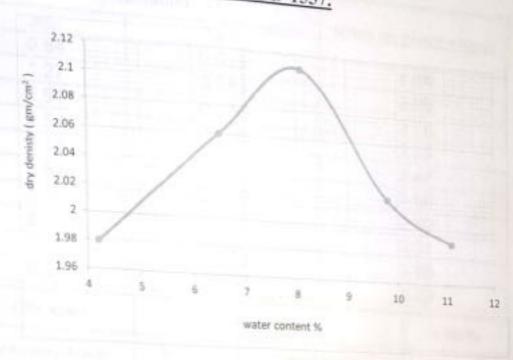
Company Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Type of sample Location

: St. (476+980) **Delivery Date** : 17/11/2022 Reporting Date : 23/11/2022

Reporting No. : 57 Sample No. : 26

Moisture - Density relation of soil Test result (Modified proctor test) ASTM D-1557.



Max dry density (gm/cm²)

Optimum moisture content %

مكتب معشل الإستشغرات اله

Signature /

الساحل الشمال

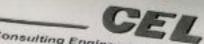
3 El Malek El Afdal Street

Zamulck, Cairo.

Tel.& Fax: 27367231 - 27363093



٢ ش الملك الأفضل الزمالك- القاهرة لليفون - فاكس د ۲۷۳۹۷۴۳ - ۲۲۳۲۳ www.cel-egypt.com



company Name : EGYPTIAN UNITED GROUP

project

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh type of sample

Location : St. (476+980) Delivery Date : 17/11/2022 Reporting Date : 23/11/2022

Reporting No. : 57 Sample No. : 26

Test Results of California Bearing Ratio on Base Materials ASTM D 1883

penetrati	on	
mm	Inch	stress on piston (Mpa)
0.64	0.025	1.00
1.27	0.050	1.89
1.91	0.075	2.08
2.54		2.18
3.18	0.100	2.35
	0.125	2.44
3.81	0.150	2.58
4.45	0.175	2.80
5.08	0.200	3.01
5.71	0.225	3.18
6.35	0.250	3.29

CBR Result	St	ress (Mpa)	CBR %
At 0.1 inch (2.54 mm)	St. Value	Sample results	
penetration	6.90	2.35	34.1

Notes:

Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of 2.11 (gm/cm3) at 8.1 % optimum of the content.

3- Surpharge load 4:50

Signature

3 El Malek El Afdal Street

Zamalek, Cairo.

Tel.& Fax: 27367231 - 27363093



٣ ش العلك الأفضل الزمالك - القاهرة تليفون + فاكس ، ٢٧٣٦٧٢١ - ٢٧٣٦٢٠٩٢ www.cel-egypt.com





مكتب معامل الإستشارات الهندسية Company Name : EGYPTIAN UNITED GROUP

project

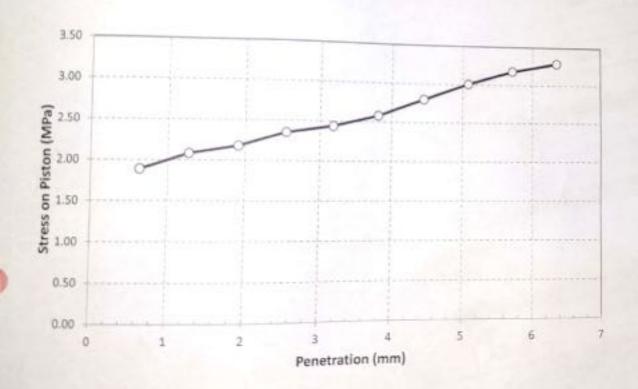
: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Type of sample

Location : St. (476+980)

Delivery Date : 17/11/2022 Reporting Date : 23/11/2022

Reporting No. : 57 Sample No. : 26

Load Penetration Curve of CBR Test ASTM D-1883



Signature

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٣ ش الملك الأفضل الزمالك - القاهرة لليفول + فاكس ، ٢٧٣٦٧٢٢١ - ٢٧٢٦٢٠٩٣ www.cel-egypt.com













Contractor Company	United Egypt	ion Four	ndatio	1	Desig	gner C	ompa	ny	SGA	C		
Issued by	Name	Sign	110	,	Date				Time			
Contractor	Mahmoud Shawish	5	*		6	. 12	. 20	20				
Received by ER				MIR	C1	C	G	00	ММ	YY	ж	MM

CODE-1	S1 to S21 Station Reference	D1 to 53 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2		Work Activity	
CODE - 3		Sub Element of Activity	

Desc	ription of N	Materials			1	Fill material	re	sults		
Locat	ion to be L	Jsed	1-From station47 2-From station47							
MAR	Approval I	No					_	Date		
Supp	lier Name									
Test	Requireme	nt			Spe	cification		Clause		
Refer	ence Photo	05	Yes attached / No		Oth	er		1 -1 -10		
item	Descripti	on		Uni	t	Quantity	A	rrival Date	Note	
1	The second second second	& O.M.C	%	m3		5000	1		100000	
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Page 1 of 1



Contractor











Designer Company



SGAC

Contractor	U	nited Egyption Foundation				Designer	SGAC					
Company	_	mica cg/p	Sign	No.		Date	Time					
issued by	Name		Sign									
Contractor	Mahmo	ud Shawlesh	1	1		6.12	.2	2)				
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Received by ER					MIR							
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CODE-2	Station	Reference		V	Jork Act	tivity			n. carto			111111111
CODE - 3				Sub El	ement o	of Activity						
Description o	of Materials				Fill	l material re	sults					
Location to b	e Used	1-From sta 2-From sta 3-From sta	tion477+	100 to st	ation		5)					
MAR Approv	al No						D	ate	1			
Supplier Nan	ne					15-112			-			
Test Require	ment			Spe	ecifica	tion	d	lause				
Reference Ph	notos	Yes attache	d / No	Ott	ner							
	ription			Unit		Quantity	Arriv	al Date	1	Vote		
1 CBR				m3		10000		00.151211220				
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Company Name : EGYPTIAN UNITED GROUP

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Project

: Soil Replacement (Embankment) Type of sample

: St. (476+100) Location : 30/11/2022 **Delivery Date**

: 06/12/2022 Reporting Date

: 59 Reporting No. : 28 Sample No.

Dear Gentleman,

Attached here with the Soil Replacement delivered on 30/11/2022

Materials test

Sieve analysis according to ASTM D-422.

Material finer than sieve No. 200 according to ASTM D-1140.

3. Liquid limits and plasticity index of soil according to ASTM D-4318.

4. Soil classification according to Project Specs.

Proctor test according to ASTM D-1557.

CBR according to ASTM D-1883.

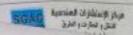
Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signatur

مكتب معامل الإستشاقرات الهلد

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











Company Name : EGYPTIAN UNITED GROUP Project

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Type of sample

: Soil Replacement (Embankment) Location

: St. (476+100) **Delivery Date** : 30/11/2022 Reporting Date : 06/12/2022

Reporting No. : 59 Sample No. : 28

Results of Sieve Analysis According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	
25	95.8
19	84.1
	74.1
12.50	65.2
9.50	57.1
4.75	48.2
2.36	
2.00	45.5
7.00	43.1
1.18	38.2
0.600	34.3
0.425	31.6
0.300	27.5
0.150	19.1

Signature /

CEL مكتب معامل الاستشارات البال

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عدمل فنرسي: 837 - 834 - 100 - 100 مثلث ... الإسلام - 200 مثلث ... الإسلام - 200 مثلث ... الإسلام - 200 مثلث ...

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Tel.& Fax: 27367231 - 27363093



٢ شن العلك الأخضل الزمالك - القاهرة تليفون + فاكس : ۲۷۳۱۲۲۳۱ - ۲۲۳۲۲۳۳ www.cel-egypt.com



Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+100)

Delivery Date : 30/11/2022

Reporting Date : 06/12/2022

Reporting No. : 59 Sample No. : 28

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

Test	Results (%)
Percentage of material finer than	
Sieve Size 75 µM (No.200)	13.6

Signature /

السماحيل الشمالي دفروسيد النوس، 137 - 1919 و 192 عرف النوس ، 3 شرع الله اللفار - الروع - النام

مان معلن الاستارات

Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+100) **Delivery Date** : 30/11/2022 Reporting Date : 06/12/2022

Reporting No. : 59 Sample No. : 28

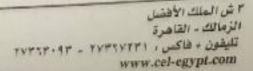
Results of liquid limit and plasticity index of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

معتب معلى المستطاعية Signature الساحل الشمالي يار كان مال الشريعي: 837 - 854 - 140 - 140 C ركز الرئيسي والأشارع البلك الالشار - فزولات - الالترة

3 El Malek El Afdai Street

Zamalek, Cairo.





Company Name : EGYPTIAN UNITED GROUP

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Location : St. (476+100)

Delivery Date : 30/11/2022 Reporting Date : 06/12/2022

Reporting No. : 59 Sample No. : 28

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according	
Group Classification	A-1-b	(A-1-a)	(A-1-b)
	43.1	Max 50 %	
2.00 mm (No.10).	31.6	Max 30 %	Max 50 %
0.425 mm (No. 40). 0.075 mm (No. 200).	13.6	Max 15 %	Max 15 %
Characteristics of fraction passing 0.		0)	
Liquid Limit	NP		
Plasticity index	NP	Max 6 %	Max 6 %

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

Signature ... المنطقة المنطقة

3 El Malek El Afdal Street Zamalek, Cairo.

Tel.& Fax: 27367231 - 27363093



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: EGYPTIAN UNITED GROUP Company Name

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Project

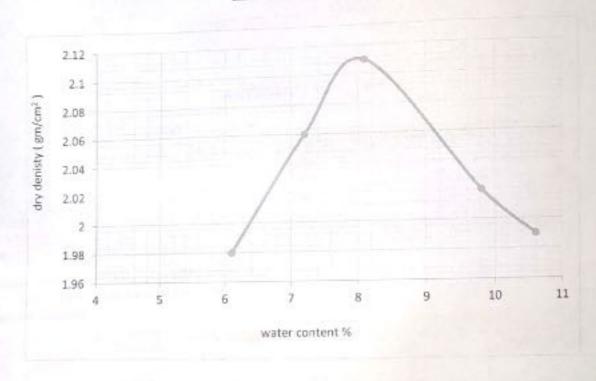
: Soil Replacement (Embankment) Type of sample

: St. (476+100) Location Delivery Date : 30/11/2022

Reporting Date : 06/12/2022

Reporting No. : 59 Sample No. : 28

Moisture - Density relation of soil Test result (Modified proctor test) ASTM D-1557.



Max dry density (gm/cm2) : 2.11

Optimum moisture content % : 8.1

Signature /

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CEL مكثب معامل الإستشارات الهله المبلحل الشيمال



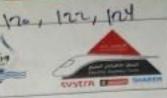
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Company Name : Egyptian United Group

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Delivery Date : 26-01-2023 Reporting Date : 06-02-2023

Reporting No. : 03 Sample No. : 02

Dear Gentleman,

Attached here with the Soil Replacement delivered on 26 / 01 / 2023

Materials test

1. Sieve analysis according to ASTM D-422.

2. Material finer than sieve No. 200 according to ASTM D-1140.

3. Liquid limits and plasticity index of soil according to ASTM D-4318.

4. Soil classification according to Project Specs.

5. Proctor test according to ASTM D-1557.

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

Signature

الساحل الورمالل المساحل المرسالل المرس

مكتب معامل الإستشارات الو

3 El Malek El Afdal Street Zamalek, Cairo.





Company Name : Egyptian United Group

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Delivery Date : 26-01-2023 Reporting Date : 06-02-2023

Reporting No. : 03 Sample No. : 02

Results of Sieve Analysis According to ASTM D-422.

Sieve Size (mm)	Passing %	
50	97.8	
37.5	91.2	
25	85.2	
19	71.4	
12.50	62.3	
9.50	51.4	
4.75	38.9	
2.36	33.3	
2.00	31.4	
1.18	30.5	
0.600	28.5	
0.425	26.2	
0.300	21.7	
0.150	14.8	

مكتب معامل الإستشارات الولاسية الساحال الشمالي

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3 El Malek El Afdal Street Zamalek, Cairo.





Company Name : Egyptian United Group

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Delivery Date : 26-01-2023 Reporting Date : 06-02-2023

Reporting No. : 03 Sample No. : 02

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

Test	Results (%)		
Percentage of material finer than Sieve Size 75 μM (No.200)	10.8		

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Consulting Engineering Bureau & Laboratories

Company Name : Egyptian United Group

Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

Type of sample : Soil Replacement (Embankment)

Delivery Date : 26-01-2023 Reporting Date : 06-02-2023

Reporting No. : 03 Sample No. : 02

Results of liquid limit and plasticity index of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

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3 El Malek El Afdal Street Zamalek, Cairo.





Name : Egyptian United Group

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh

ope of sample : Soil Replacement (Embankment)

pelivery Date : 26-01-2023
Reporting Date : 06-02-2023

Reporting No. : 03 Sample No. : 02

Soil Classification According to Project Specs (Embankment)

TEST	Results	Limits according	
Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
	31.4	Max 50 %	******
2.00 mm (No.10). 0.425 mm (No. 40).	26.2	Max 30 %	Max 50 %
0.075 mm (No. 200).	10.8	Max 15 %	Max 15 %
Characteristics of fraction passing 0.4	125 mm (No.40)	
Liquid Limit	NP		******
Plasticity index	NP	Max 6 %	Max 6 %

The test results are to Comply Not Comply) with specifications limits

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: Egyptian United Group

: Electric Express Train, from Al Ain Sokhna to Marsa Matrouh Company Name

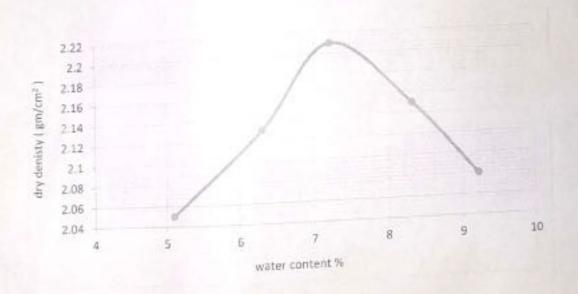
: Soil Replacement (Embankment) Project

Type of sample : 26-01-2023

Delivery Date : 06-02-2023 Reporting Date

: 03 Reporting No. : 02 Sample No.

Moisture - Density relation of soil Test result (Modified proctor test) ASTM D-1557



Max dry density (gm/cm2) : 2.21

Optimum moisture content % : 7.2

Signature

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