

Company Name

شركة الذهبي :

Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 16/7/2023

Soil type

: Soil Embankment

Location

: ST From 641+000 To 641+140

Level

: -4.0 M

Report No.

: 03

Compaction test by using Sand – Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+020	1500	2.19	5	2.08	97.8%	Comply
2	641+100	1432	2.19	5.3	2.08	97.5%	Comply

- Degree of compaction based on proctor test dated At :
 - Max. dry density = 2.13 gm/cm³

. At optimum moisture content = 6.4 %

Signature

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Zarules, Caro.

Te8 Fax 27367231 27363093



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Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

Dear Gentleman,

Attached here with the delivered on 18 / 5 / 2023

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.
- 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

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023

Reporting Date : 23/5/2023

Reporting No. : 05

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100
37.5	1.5	100
25	1	98.8
19	3/4	96.2
12.50	1/2	92.2
9.50	3/8	88.8
4.75	4	82.4
2.00	10	74.4
0.425	40	38.5

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

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)	10.7	ż

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

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

Test	Results (%)	
Liquid Limit	0	
Plastic Limit	0	
Plasticity Index	0	

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شركة الذهبي: Company Name

Project : Electric Expr

: Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023

Reporting Date : 23/5/2023

Reporting No. : 05

Soil Classification

TEST	Results (%)	The state of the s	Limits according Projects Specs		
Group Classification	A-1-b	(A-1-a)	(A-1-b)	(<u>A</u> -2-4)	
2.00 mm (No.10).	74.4	Max 50 %			
0.425 mm (No. 40).	38.5	Max 30 %	Max 50 %		
0.075 mm (No. 200).	10.7	Max 15 %	Max 15 %	Max 15 %	
Liquid Limit					
Plasticity index	0	Max 6 %	Max 6 %	Majx 10 %	

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

Signature

ما المادة الماد

3 El Malek El Aldai Street Zamalek, Cairo

Tel& Fax 2736721 - 27363093

IAS ACCREDITED حَلَى المِنَامِ الأَصْلَــنِ الرِحِكَاتِ الْخُلَّمِيةِ الرِحِكَاتِ الْخُلَمِيةِ (١٩٤٢-١١) (١٧٤٢-١١٠



شركة الذهبي : Company Name

Project : Electric Express Train - HSR From Qous To Armant

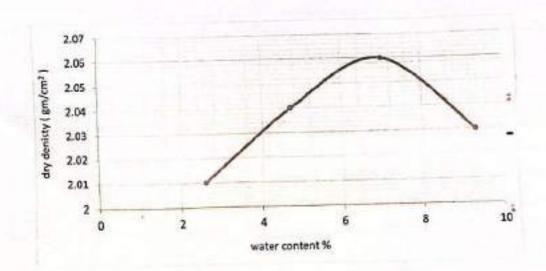
Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

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



Max dry density (gm/cm²)

: 2.06

· Optimum meisture centent

: 7.0 %

Signature

. 3 تارع الله الالفتال

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التي الهلاما الأفسار الرمالك المنافرة المدر التامي (١٩٧٢ - ١٩٣١ - ١٩٣١



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %	
50	2	100	
37.5	1.5	100	
25	1	98.8	
19	3/4	96.2	
12.50	1/2	92.2	
9.50	3/8	88.8	
4.75	4	82.4	
2.00	10	74.4	
0.425	40	36.5	





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

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)	10.7





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023

Reporting Date : 23/5/2023

Reporting No. : 05

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

pene	etration	stress on piston (Mpa)	
mm	Inch		
0.64	0.025	0.22	
1.27	0.050	0.61	
1.91	0.075	1.01	
2.54	0.100	1.46	
3.18	0.125	1.74	
3.81	0.150	1.85	
4.45	0.175	1.76	
5.08	0.200	1.58	
6.35	0.250	1.19	

CBR Result	Stress (Mpa)		CBR 100 %	
At 0.1 inch (2.54 mm)	St. Value	Sample results	21.2 %	
penetration	6.90	1.46		

Notes:

Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of = 2.06 (gm/cm³)
At = 7.0 % optimum water content.

3- Surcharge Gad H5 Kg.

4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature 219 fog 43 for 1

3 El Malek El Aldal Street





Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

Dear Gentleman,

Attached here with the delivered on 18 / 5 / 2023

Materials test

1. 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 went it is taken

Signature

3 E Mack E Afta Street Zamatos, Carro Te& Fax: 273672 1 - 27363750





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

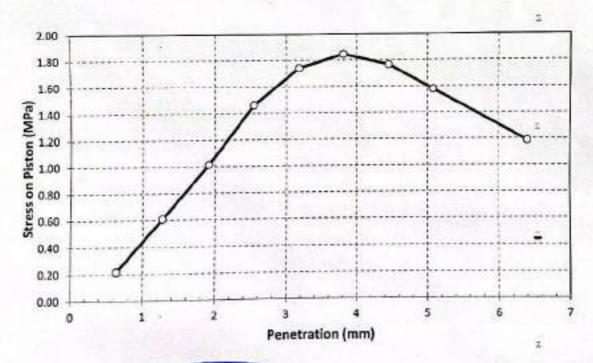
Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

Load Penetration Curve of CBR Test ASTM D-1883





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To & Fax 2736723" 27363093



الترابية الأكتبير غربان، الأطوم غيور واكتر (14°47-51 (15°47-51 كالمعرور)



شركة الذهبي: Company Name

Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 20/7/2023

Soil type

: Middle Embankment

Location

: St From 641+100 To 641+160

Level

: -3.5 M

Report No.

: 08

Compaction test by using Sand – Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+110	1472	2.13	5.3	2.02	98.0%	Comply
2	641+140	1471	2.10	5.8	1.99	96.4%	Comply

. Degree of compaction based on proctor test dated At :

Max. dry.density = 2.06 gm/cm³

At optimum maisture content = 7.0 %

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

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

Test	Results (%)
Liquid Limit	0
Plastic Limit	0
Plasticity Index	0



CEIPT of NOTIFICATION - Minimum I Was i described below will be complete and ready	Notice Period not less than 24 Hour for ampention at planned time shows		
Location Name	Contractor Company	Designer Company	
From 641+000 to 641+100	EL-ZAHABY contraction	(SPECTRUM) Engineering Consulting Office	
Name	Sign Date	Time	

شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

Soil Classification

TEST	Results (%)		Limits according Projects Specs		
Group Classification	A-1-b	(A-1-a)	(A-1-b)	(A-2-4)	
2.00 mm (No.10).	74.4	Max 50 %	=		
0.425 mm (No. 40).	38.5	Max 30 %	Max 50 %	*****	
0.075 mm (No. 200).	10.7	Max 15 %	Max 15 %	Max 15 %	
Liquid Limit		******			
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %	

The test results are Li Comply - | Not Comply) with specifications limits

3 El Malek El Afrika Street



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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

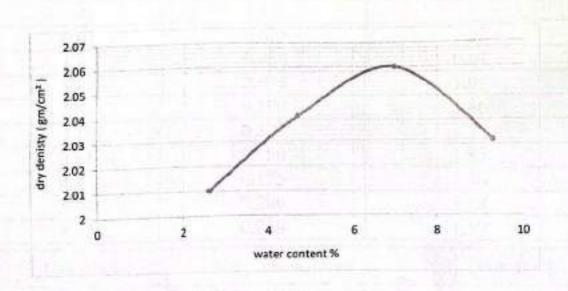
Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023 Reporting Date : 23/5/2023

Reporting No. : 05

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



Max dry density (gm/cm²)

: 2.06

Ontimum moistage content

: 7.0 %

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Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

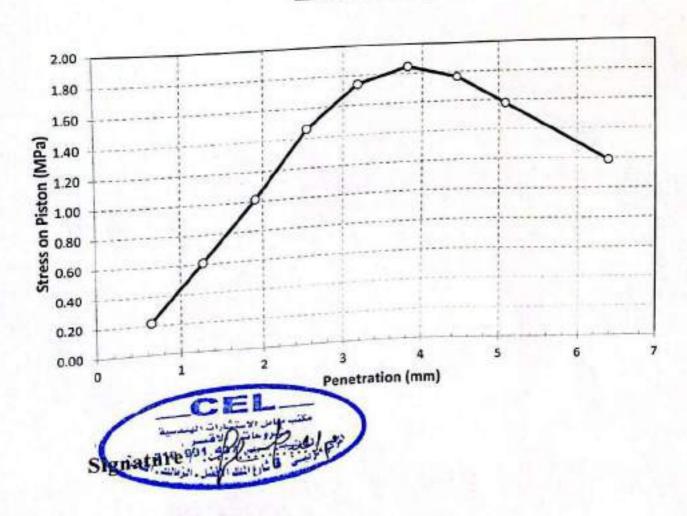
Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 18/5/2023

Reporting Date : 23/5/2023

Reporting No. : 05

Load Penetration Curve of CBR Test ASTM D-1883





Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 19/7/2023

Soil type

: Middle Embankment

Location

: ST From 641+000 To 641+100

Level

: -3.5 M

Report No.

: 07

Compaction test by using Sand - Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+030	1380	2.09	5.8	1.98	96.1%	Comply
2	641+070	1526	2.10	5.3	1.99	96.7%	Comply

Degree of compaction based on proctor test dated At :

Max. dry density = 2.06 gm/cm³

At optimum maisture centent = 7.0 %

Signature

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شركة الذهبي : Company Name

: Electric Express Train - HSR From Qous To Armant Project

: (ST: 641+100) E=32.9226620 N=25.8862030 Location

: Soil Embankment (Upper Embankment 0.0 M) Type of sample

: 18/5/2023 **Delivery Date**

Reporting Date : 23/5/2023

: 05 Reporting No.

Test Results of California Bearing Ratio on Base Materials

Test recommend	ASTM D 188	3
pene	etration	stress on piston (Mpa)
mm	Inch	
mm 0.64	0.025	0.22
0.64	0.050	0.61
1.27	0.075	1.01
1.91	0.100	1.46
2.54	0.125	1.74
3.18		1.85
3.81	0.150	1.76
4.45	0.175	1.58
5.08	0.200	1.19
	0.250	1.19
6.35	0.250	1.19

results	21.2 %
46	3,000,000
	.46

Notes:

 Attached graph shows penetration resistance versus penetration magnitude. 2- The sample was compacted to dry density of = 2.06 (gm/cm³)

ptimum water content.

and lower embankments according project spec page No 36.

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Project : Electric Express Train - HSR From Qous To Armant

Testing Date : 25/7/2023

Soil type : Middle Embankment

Location : St From 641+220 To 641+300

Level : -4.5 M

Report No. : 11

Compaction test by using Sand - Cone Test Method ASTM D-1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+240	1557	2.10	5.8	1.99	95.4%	Comply
2	641+280	1767	2.10	5.8	1.98	95.4%	Comply

- Degree of compaction based on proctor test dated At :
 - Max. dry density = 2.08 gm/cm³

At optimum moisture content = 7.0 %

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 20/7/2023

Reporting Date : 24/7/2023

Reporting No. : 05-2

Dear Gentleman,

Attached here with the delivered on 20 / 7 / 2023

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.
- 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

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 20/7/2023 Reporting Date : 24/7/2023

Reporting No. : 05-2

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100
	1.5	100
37.5	1	97.3
25	3/4	95.4
19	1/2	91,6
12.50	3/8	87.4
9.50	4	81.5
4.75	10	71.3
2.00	The Street of th	36.8
0.425	40	-



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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 20/7/2023 Reporting Date : 24/7/2023

Reporting No. : 05-2

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)	11.4







شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 20/7/2023

Reporting Date : 24/7/2023

Reporting No. : 05-2

Soil Classification

TEST	Results (%)		Limits according Projects Specs		
Group Classification	A-1-b	(A-1-a)	(A-1-b)	(A-2-4)	
2.00 mm (No.10).	71.3	Max 50 %			
0.425 mm (No. 40).	36.8	Max 30 %	Max 50 %		
0.075 mm (No. 200).	11.4	Max 15 %	Max 15 %	Max 15 %	
Liquid Limit		T			
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %	

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

Signature / 219 College Colleg

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الشرائدات الأمييني الإخارات المتقوم المجين حالتين (Taryon) و Syrye



شركة الذهبي : Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 20/7/2023 Reporting Date : 24/7/2023

Reporting No. : 05-2

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

Test	Results (%)
Liquid Limit	0
Plastic Limit	0
Plasticity Index	0







شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

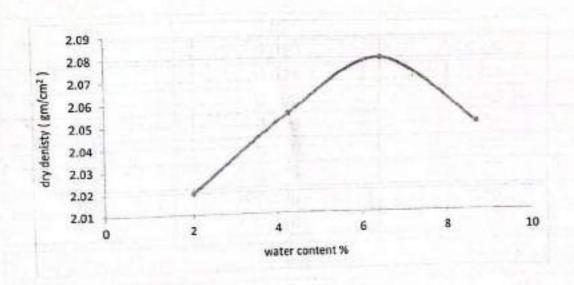
Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 20/7/2023 Reporting Date : 24/7/2023

Reporting No. : 05-2

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



Max dry density (gm/cm²)

: 2.08

Optimum moisture content

: 6.4 %

Signature/

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3 El Maiek El Afritat Street Zamollov, Carro, Tel& Finx (273672)** (27363093) IAS ACCREDITED * في الهلامة الأناسس الرسائل المتاهورة اليمين الناشي (10 (100 ع)، ويعوده



شركة الذهبي: Company Name

Project

: Electric Express Train - HSR From Qous To Armant

: (ST: 641+100) E=32.9226620 N=25.8862030 Location

: Soil Embankment (Upper Embankment 0.0 M) Type of sample

Delivery Date : 20/7/2023 Reporting Date : 24/7/2023

: 05-2 Reporting No.

Test Results of California Bearing Ratio on Base Materials

W	ASTM D 188	3
pen	etration	stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.25
1.27	0.050	0.66
1.91	0.075	1.07
2.54	0.100	1.52
3.18	0.125	1.78
	0.150	1.88
3.81	0.175	1.77
4.45	0.200	1.56
5.08	0.250	1.12
6.35	0.230	

CBR Result	St	ress (Mpa)	CBR 100 %
	St. Value	Sample results	22 %
At 0.1 iach (2.54 mm) penetration	6.90	1.52	

Notes:

1- Attached graph shows penetration resistance versus penetration magnitude.

2. The sample was compacted to dry density of = 2.08 (gm/cm3) At = 6.4 % obtimum water content.

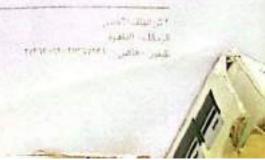
3- Surcharge load 450 Kg

4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature / 316 30

S.E. Marie E. Attail Clinic Zianaderi, Gairo WAR IN 219 727 - 27 69603







شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

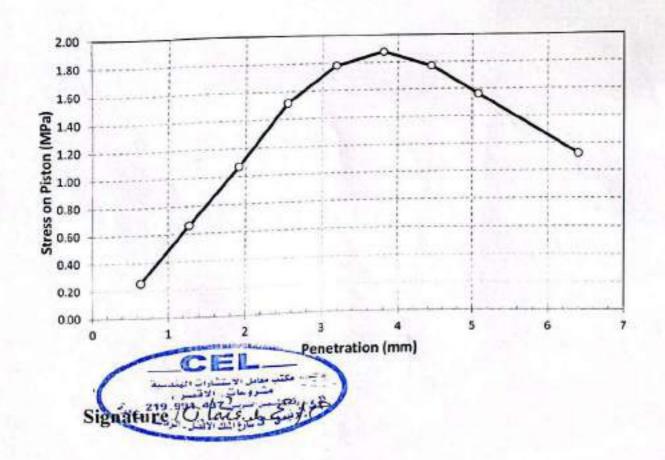
Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 20/7/2023 Reporting Date : 24/7/2023

Reporting No. : 05-2

Load Penetration Curve of CBR Test ASTM D-1883



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Project : Electric Express Train - HSR From Qous To Armant

Testing Date : 18/7/2023

Soil type : Soil Embankment

Location : ST: From 641+240 To 641+300

Level : -5.0 M

Report No. : 05

Compaction test by using Sand - Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+260	1505	2.17	5.8	2.05	99.7%	Comply

Degree of compaction based on proctor test dated At :

Max. dry density = 2.06 gm/cm³

At optimum moisture content = 7.0 %



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* أن الملك الأنسان الرماك الإنادي شدير - فلكني = (١٤٠١/١٠٠١) - ١٤٣١/١٠



Project : Electr

: Electric Express Train - HSR From Qous To Armant

Testing Date : 26/7/2023

Soil type : Middle Embankment

Location : St From 641+000 To 641+100

Level : -3.0 M

Report No. : 13

Compaction test by using Sand - Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm ²	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+040	1923	2.09	5.5	1.98	95.3%	Comply
2	641+080	1298	2.17	5.8	2.05	98.4%	Comply

Degree of compaction based on proctor test dated At :

Max. dry density = 2.08 gm/cm³

. At optimum moisture content = 6.4%

Signature /

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Project : Electric Express Train - HSR From Qous To Armant

Testing Date : 01/08/2023

Soil type : Middle Embankment

Location : St From 641+100 To 641-160

Level : -3 M

Report No. : 22

Compaction test by using Sand - Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
1	641+120	1414	2.13	5.8	2.01	96.8%	Comply
2	641+140	1446	2.14	5.8	2.03	97.4%	Comply

- Degree of compaction based on proctor test dated At :
 - Max. dry density =2.08 gm/cm³

At optimum moisture content = 6.4 %

Signature J. C. Cale 1791 P.

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شركة الذهبي : Company Name Project : Electric E:

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 05/08/2023

Soil type

: Middle Embankment

Location

: St From 641+220 To 641+300

Level

: -4.0 M

Report No.

: 26

Compaction test by using Sand - Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+250	1574	2.19	6.4	2.06	96.7%	Comply
2	641+280	1581	2.13	5.2	2.03	95.2%	Comply

- Degree of compaction based on proctor test dated At :
 - Max. dry density =2.13 gm/cm³

At optimum moisture content = 6.4 %

Signature /

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ى 3 ئارغ اللك

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 22/7/2023

Reporting Date : 26/7/2023

Reporting No. : 05-3

Dear Gentleman,

Attached here with the delivered on 22/7/2023

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
- 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 / ... (2005)

3 E. Muzek E. Afrika Stront Zamakes, Garro Te& Pax (27367), 1 - 27363033





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 22/7/2023 Reporting Date : 26/7/2023

Reporting No. : 05-3

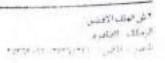
RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100
37.5	1.5	97.1
25	1	93.1
19	3/4	90.0
12.50	1/2	85.5
9.50	3/8	81.6
4.75	4	77.6
2.00	10	72.9
0.425	40	39.9



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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 22/7/2023 Reporting Date : 26/7/2023

Reporting No. : 05-3

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)	11.3







شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 22/7/2023 Reporting Date : 26/7/2023

Reporting No. : 05-3

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

Test	Results (%)
Liquid Limit	0
Plastic Limit	0
Plasticity Index	0



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 22/7/2023 Reporting Date : 26/7/2023

Reporting No. : 05-3

Soil Classification

TEST	Results (%)	Clarents.	nits accordi Projects Spec	
Group Classification	A-1-b	(A-1-a)	(A-1-b)	(A-2-4)
	72.91	Max 50 %		*****
2.00 mm (No.10).	39.87	Max 30 %	Max 50 %	
0.425 mm (No. 40). 0.075 mm (No. 200).	11.3	Max 15 %	Max 15 %	Max 15 %
Canal I I Imie				
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

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

Signature 19 Grant El Cy

y E Mark E APLI Filled Zarados, Garri Garrian (1786/20) (2787/850)





شركة الذهبي : Company Name

Project : Electric Express Train - HSR From Qous To Armant

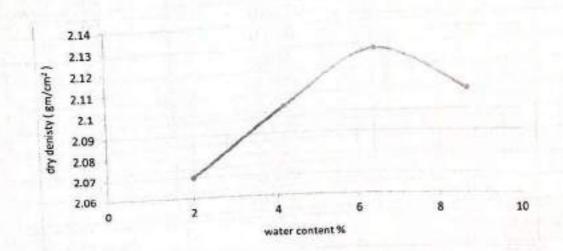
Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 22/7/2023 Reporting Date : 26/7/2023

Reporting No. : 05-3

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



Max dry density (gm/cm²)

: 2.13

Optimum-moisture content %

: 6.4 %

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Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 22/7/2023 Reporting Date : 26/7/2023

Reporting No. : 05-3

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

ASTW D 1805	
tration	stress on piston (Mpa)
Inch	
0.025	0.25
	1.01
	1.78
	2,43
The state of the s	3.05
	3.55
	3.96
0.200	4.16
0.250	4.06
	Inch 0.025 0.050 0.075 0.100 0.125 0.150 0.175 0.200

CBR Result	St	ress (Mpa)	CBR 100 %
440 (In al. (3 f)	St. Value	Sample results	35.3 %
At 0.1 inch (2.54 mm)	6.90	2.43	

Notes:

1- Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of = 2.13 (gm /em³)
At 6.4 % optimum water content.

3- Surcharge load 4.50 Kg.

4- CBR > 10 for middle and lower embankments according project spec page No 36.

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

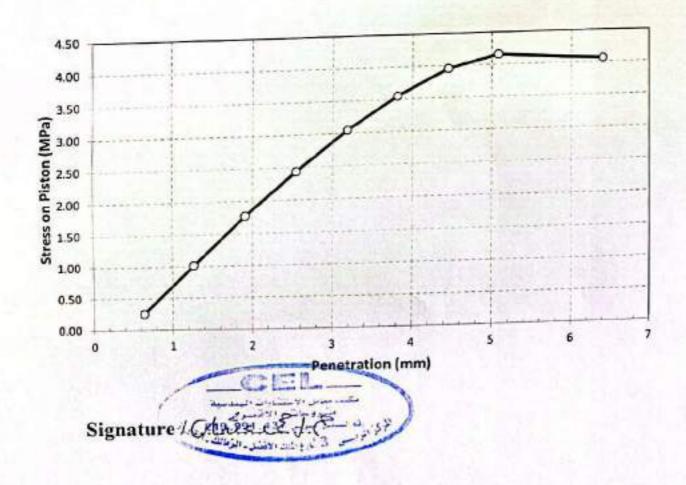
Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 22/7/2023 Reporting Date : 26/7/2023

Reporting No. : 05-3

Load Penetration Curve of CBR Test ASTM D-1883







Project : Electric Express Train - HSR From Qous To Armant

Testing Date : 12/08/2023

Soil type : Middle Embankment

Location : St From 641+180 To 641+300

Level : - 3.5 M

Report No. : 32

Compaction test by using Sand - Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+200	1352	2.17	5.5	2.06	96.1%	Comply
2	641+250	1488	2.20	5.5	2.09	97.6%	Comply
3	641+280	1369	2.20	5.5	2.09	97.5%	Comply

- Degree of compaction based on proctor test dated At :
 - Max. dry density =2.14 gm/cm³
 - At optimum moisture content = 6.4 %

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Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 26/7/2023 Reporting Date : 30/7/2023

Reporting No. : 05-4

Dear Gentleman,

Attached here with the delivered on 26 / 7 / 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.
- 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

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 26/7/2023 Reporting Date : 30/7/2023

Reporting No. : 05-4

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	98.2
37.5	1.5	95.2
25	1	91.5
19	3/4	88.2
12.50	1/2	84.5
9.50	3/8	80.2
4.75	4	73.5
2.00	10	70.1
0.425	40	35.4





Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 26/7/2023 Reporting Date : 30/7/2023

Reporting No. : 05-4

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

Test	Results (%)
Liquid Limit	O O O O O O O O O O O O O O O O O O O
Plastic Limit	0
Plasticity Index	0





مكتب معامل الإستشارات الهندسية

شركة الذهبي: Company Name

: Electric Express Train - HSR From Qous To Armant Project

: (ST: 641+100) E=32.9226620 N=25.8862030 Location

: Soil Embankment (Upper Embankment 0.0 M) Type of sample

Delivery Date : 26/7/2023 Reporting Date : 30/7/2023

Reporting No. : 05-4

Soil Classification

TEST	Results (%)		nits accordi Projects Spec	
Group Classification	A-1-b	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	70.1	Max 50 %		
0.425 mm (No. 40).	35.4	Max 30 %	Max 50 %	
0.075 mm (No. 200).	10.3	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	70000 A		*****	74
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

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

Signature /

3 E. Marek E. Ahtal Street Zurwien, Caro loater 273572 2735393





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 26/7/2023 Reporting Date : 30/7/2023

Reporting No. : 05-4

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)	10.3

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Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 22/7/2023 Reporting Date : 26/7/2023

Reporting No. : 05-2

Test Results of California Bearing Ratio on Base Materials

pene	etration	stress on piston (Mpa)
mm	Inch	suces on piston (11-pa)
0.64	0.025	0.36
1.27	0.050	1.09
1.91	0.075	1.83
2.54	0.100	2.49
3.18	0.125	2.94
3.81	0.150	3.30
4.45	0.175	3.55
5.08	0.200	3.65
6.35	0.250	3.55

CBR Result	St	ress (Mpa)	CBR 100 %
At 0.1 inch (2.54 mm)	St. Value	Sample results	26.04
penetration	6.90	2.49	36 %

Notes:

- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.14 (gm/cm³) At = 6.4 % optimum water content.

3- Surcharge load 4.50 kg.

4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature

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Zar West, Caro

To & Fax 273676.37 273630.93





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

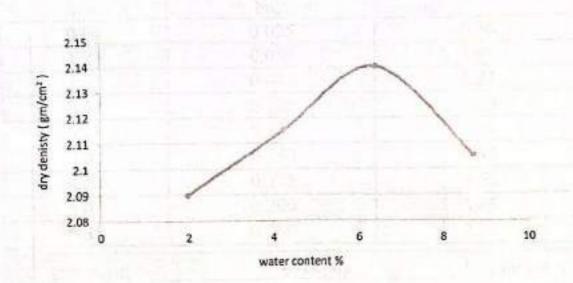
Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 26/7/2023 Reporting Date : 30/7/2023

Reporting No. : 05-4

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



Max dry density (gm/cm²)

: 2.14

· Optimum moisture content %

: 6.4 %

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

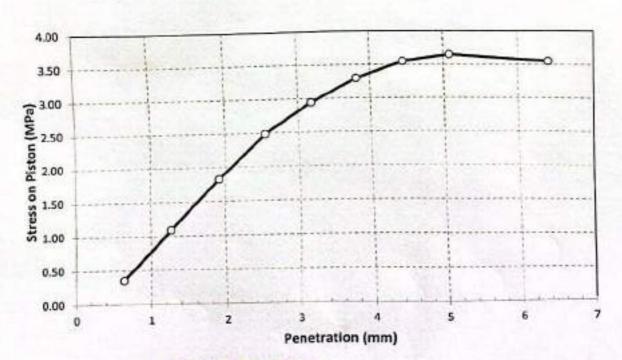
Location : (ST: 641+100) E=32.9226620 N=25.8862030

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 22/7/2023 Reporting Date : 26/7/2023

Reporting No. : 05-2

Load Penetration Curve of CBR Test ASTM D-1883





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Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 15/08/2023

Soil type

: Middle Embankment

Location

: St From 641+160 To 641+300

Level

: - 3.0 M

Report No.

: 35

Compaction test by using Sand - Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+200	1370	2.19	5.8	2.07	96.7%	Comply
2	641+220	1506	2.18	5.8	2.06	96.2%	Comply
3	641+280	1378	2.23	5.8	2.11	98.4%	Comply

- Degree of compaction based on proctor test dated At :
 - Max. dry density =2.14 gm/cm³

At optimum moisture content = 6.4 %

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Te& Fax: 2736723" - 27363093

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Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample ; Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023 Reporting Date : 8/8/2023

Reporting No. : 04-2

Dear Gentleman,

Attached here with the delivered on 4/8/2023

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.
- 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.

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023 Reporting Date : 8/8/2023

Reporting No. : 04-2

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	98.6
37.5	1.5	89.6
25	1	83.4
19 of material fi	of 1100 1 3/4	82.3
12.50	1/2	81.3
	3/8	80.9
9.50	4	72.6
4.75	10	56.3
0.425	40	31.4



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023 Reporting Date : 8/8/2023

Reporting No. : 04-2

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)	13.8

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023 Reporting Date : 8/8/2023

Reporting No. : 04-2

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

Test	Results (%)
Liquid Limit	(a)) 5 < 0 and 5 Man
Plastic Limit	0
Plasticity Index	State of the Min





شركة الذهبي: Company Name

Project : Electric E

: Electric Express Train - HSR From Qous To Armant

Location

: (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample

: Soil Embankment (Upper Embankment 0.0 M)

Delivery Date

: 4/8/2023

Reporting Date

: 8/8/2023

Reporting No.

: 04-2

Soil Classification

TEST	Results (%)	Lir I		
Group Classification	A-1-b	(A-1-a)	(A-1-b)	(A-2-4)
0.00	56.3	Max 50 %		
2.00 mm (No.10).	31.4	Max 30 %	Max 50 %	
0.425 mm (No. 40). 0.075 mm (No. 200).	13.8	Max 15 %	Max 15 %	Max 15 %
		T		
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

The test results are (Comply Distor Comply) with specifications limits

Signature /

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3 E Malek E: Aldal Street

Zarvalek, Cairo. Te-8 Fax: 27367231 - 27363093 IAS ACCREDITED عشرالمات الأفتسن الرماك الشلفوذ للمين - فاكس - ١٩٧٦٢- ١٤٠ ١٧٣٦٢



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

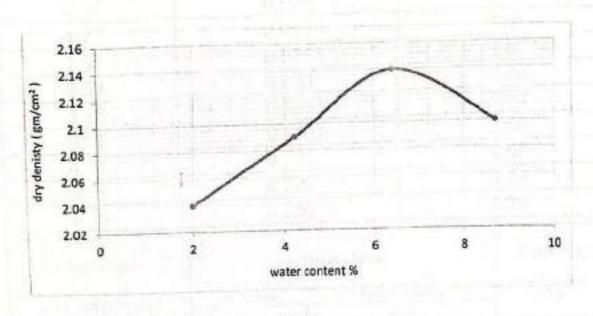
Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023

Reporting Date : 8/8/2023

Reporting No. : 04-2

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



Max dry density (gm/em²)

: 2.14

Optimum moisture content %

: 6.4 %

Signature

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شركة الذهبي : Company Name

: Electric Express Train - HSR From Qous To Armant Project

: (ST: 641+500) E= 492410,088 N=2862759,57 Location

: Soil Embankment (Upper Embankment 0.0 M) Type of sample

Delivery Date : 4/8/2023 Reporting Date : 8/8/2023

Reporting No. : 04-2

Test Results of California Bearing Ratio on Base Materials

ASTM D 1883 penetration stress on piston (Mpa) Inch mm 0.26 0.025 0.64 1.01 0.050 1.27 1.67 0.075 1.91 2.28 0.1002.54 2.94 0.125 3.18 3.50 0.1503.81 4.08 0.1754.45 4.54 0.2005.08 5.29 0.250 635

CBR Result	Stress (Mpa)		CBR 100 %	
	St. Value	Sample results	33.1 %	
At 0.1 inch (2.54 mm) penetration	6.90	2.28		

Notes:

1- Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of = 2.14 (gm/cm³) At = 6.4 % optimum water content,

3- Surcharge lond . Str.

4- CBR > 10 for middle and lower embankments according project spec page No 36.

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3 El Malek El Afdat Street

Zamalek, Cairo.

Te & Fax: 2736723: - 27363093





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

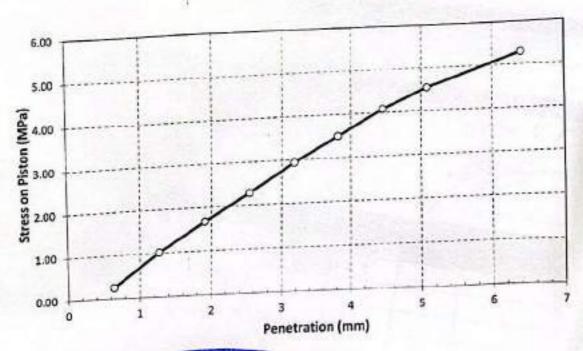
Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023 Reporting Date : 8/8/2023

Reporting No. : 04-2

Load Penetration Curve of CBR Test ASTM D-1883





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Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 14/08/2023

Soil type

: Middle Embankment

Location

: St From 641+000 To 641+160

Level

: - 2.5'M

Report No.

: 34

Compaction test by using Sand - Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+020	1410	2.21	5.8	2.09	97.8%	Comply
2	641+070	1376	2.20	5.8	2.08	97.2%	Comply
3	641+150	1570	2.26	5.8	2.13	99.6%	Comply

- . Degree of compaction based on proctor test dated At :
 - Max. dry density =2.14 gm/cm³

At optimum moisture content 64%

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Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 20/08/2023

Soil type

: Middle Embankment

Location

: St From 641+000 To 641+160

Level

: - 2.0 M

Report No.

: 39

Compaction test by using Sand - Cone Test Method ASTM D- 1556

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+030	1344	2.24	5.8	2.12	99.0%	Comply
2	641+080	1438	2.23	5.8	2.11	98.6%	Comply
3	641+120	1408	2.22	5.8	2.09	97.9%	[→] Comply

- · Degree of compaction based on proctor test dated At :
 - Max. dry density =2.14 gm/cm³

At optimum moisture content = 6-4 2

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El Malek El Afdal Street
 Zamalek, Caro.

TelS Fax: 27367231 - 27363093

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على المالك الأضال
 الزيالات الشاهرة
 الزيالات الشاهرة
 المهرن د فاكس : ٢٧٣١٢ - ٢٧٣٠٢ (٢٣٢١٢



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023

Reporting Date : 8/8/2023

Reporting No. : 04-3

Dear Gentleman,

Attached here with the delivered on 4 / 8 / 2023

Materials test

Sieve analysis according to ASTM D-422.

- 2. 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 /

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Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023 Reporting Date : 8/8/2023

Reporting No. : 04-3

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100
37.5	1.5	97 _
25	1	90
19	erthai ¾	85.4
12.50	1/2	77.2
9.50	3/8	73.3
4.75	4	69.6
2.00	10	58.5
0.425	40	40.7

3 El Malek El Afdal Street Zamalok, Cairo.

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۲ شرالطال الإفتنان الرماك الناهوة بليمان « تاكس (۲۷۳۹ - ۲۷۳۹ ۲۷۳۹



شركة الذهبي: Company Name

Project : Elec

: Electric Express Train - HSR From Qous To Armant

Location

: (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample

: Soil Embankment (Upper Embankment 0.0 M)

Delivery Date

: 4/8/2023

Reporting Date

: 8/8/2023

Reporting No.

: 04-3

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)	14.0	-





شركة الذهبي: Company Name

: Electric Express Train - HSR From Qous To Armant Project

: (ST: 641+500) E= 492410,088 N=2862759,57 Location

: Soil Embankment (Upper Embankment 0.0 M) Type of sample

: 4/8/2023 Delivery Date Reporting Date : 8/8/2023

: 04-3 Reporting No.

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

Test	Results (%)		
Liquid Limit	Here Is to 10 m 10 m	Mile	
Plastic Limit	0		
Plasticity Index	0		

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Signature /

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شركة الذهبي: Company Name

: Electric Express Train - HSR From Qous To Armant Project

: (ST: 641+500) E= 492410,088 N=2862759,57 Location

: Soil Embankment (Upper Embankment 0.0 M) Type of sample

: 4/8/2023 **Delivery Date** : 8/8/2023 Reporting Date

: 04-3 Reporting No.

Test Results of California Bearing Ratio on Base Materials ACTM D 1993

	ASTM D 100.	
pene	etration	stress on piston (Mpa)
	Inch	
mm	0.025	0.45
0.64	0.050	1.00
1.27	0.075	1.52
1.91	0.100	2.11
2.54	0.125	2.53 -
3.18	0.150	2.96
3.81		3.39
4.45	0.175	3.71
5.08	0.200	4.33
6.35	0.250	4.55

CBR Result	Stress (Mpa)		CBR 100 %
	St. Value	Sample results	30.6%
At 0.1 inch (2.54 mm) penetration	6.90	2.11	30.070

Notes:

- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.14 (gm/cm³) At = 6.4 % ontimum water content.

3- Surcharge Told 4.50 Kg

4- CBR > 10 for middle and lower embanaments according project spec page No 36.

3 شارع اللك الافتشاء

3 El Malek El Afdal Street

Zamalek, Cairo.

Tel8 Fax: 27367231 - 27353093



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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

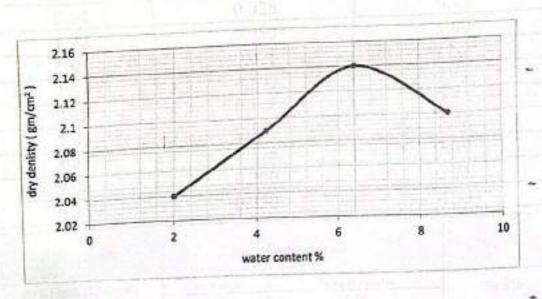
Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023

Reporting Date : 8/8/2023

Reporting No. : 04-3

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



Max dry density (gm/cm²)

: 2.14

· Optimum moisture content %

: 6.4 %

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* ش العالم الانتشاق الرجالات العاهرة المبتول : هاكس : ١٩٣٢ -١٩٣٢



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023 Reporting Date : 8/8/2023

Reporting No. : 04-3

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
Group Classification	A-1-b	(A-1-a)	(A-1-b)	(A-2-4)
	58.5	Max 50 %		
2.00 mm (No.10). 0.425 mm (No. 40).	40.7	Max 30 %	Max 50 %	
0.075 mm (No. 200).	14.0	Max 15 %	Max 15 %	Max 15 %
A. Carlo		T		
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

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

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٣ شرخاماك الإفتانية الرسال - الناهرة عليفون - هاكس - ١٧٣٦٢ - ٢٧ - ١٧٣٦٢



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

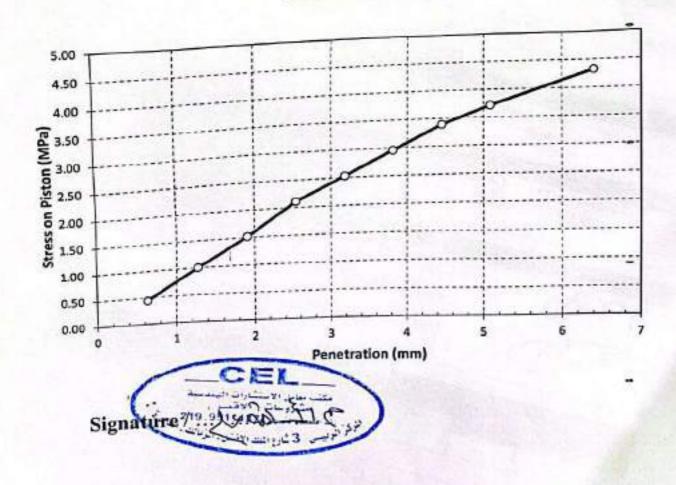
Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 4/8/2023 Reporting Date : 8/8/2023

Reporting No. : 04-3

Load Penetration Curve of CBR Test ASTM D-1883





: Electric Express Train - HSR From Qous To Armant Project

Testing Date : 20/08/2023

: Middle Embankment Soil type

Location : St From 641+160 To 641+300

Level : - 2.5 M

Report No. : 40

Compaction test by using Sand - Cone Test Method **ASTM D-1556**

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+190	1497	2.21	5.8	2.08	96.9%	Comply
2	641+240	1486	2.19	5.8	2.07	96.3%	Comply
3	641+280	1508	2.21	5.8	2.09	97.0%	Comply

- · Degree of compaction based on proctor test dated At :
 - Max. dry density =2,15 gm/cm3

Signature /

At optimum moisture content

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Project : Electric Express Train - HSR From Qous To Armant -

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment

Delivery Date : 14/8/2023 Reporting Date : 19/8/2023

Reporting No. : 04-4

Dear Gentleman,

Attached here with the delivered on 14 / 8 / 2023

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.
- 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

3 El Malek El Afdal Street Zamalek, Cairo. Tel8 Fax: 27367231 - 27363093





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment

Delivery Date : 14/8/2023 Reporting Date : 19/8/2023

Reporting No. : 04-4

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100
37.5	1.5	98.5
25	1	88.3
19	3/4	77.8
	1/2	70.3
12.50	3/8	66.7
9.50	4	61.6
4.75	10	47.8
0.425	40	28.1







شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment

Delivery Date : 14/8/2023 Reporting Date : 19/8/2023

Reporting No. : 04-4

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)	13.5	







شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment

Delivery Date : 14/8/2023 Reporting Date : 19/8/2023

Reporting No. : 04-4

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

Test	Results (%)	
Liquid Limit	0	ME
Plastic Limit	0	
Plasticity Index	0	Man







شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment

Delivery Date : 14/8/2023 Reporting Date : 19/8/2023

Reporting No. : 04-4

Soil Classification

TEST	Results Proje			
Group Classification	A-1-b	(A-1-a)	(A-1-b)	(A-2-4)
72.724	47.8	Max 50 %		
2.00 mm (No.10).	28.1	Max 30 %	Max 50 %	
0.425 mm (No. 40). 0.075 mm (No. 200).	13.5	Max 15 %	Max 15 %	Max 15 %
0.075 mm (****	1			
Liquid Limit				
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

The test results are (III omply D Not Comply) with specifications limits

Signature

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Tel& Fax: 27367231 - 27363093



۴ شرآلهاك الافتخار الزمالك الناهرة المينون - فاكس - ۲۷۳۱، ۲۷۳۱، ۲۲۳۱۲



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

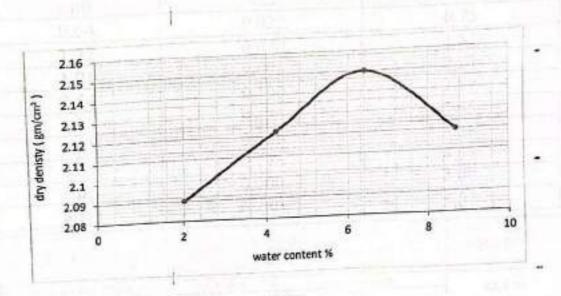
Location : (ST: 641+500) E= 492410,088 N=2862759,57

Type of sample : Soil Embankment

Delivery Date : 14/8/2023 Reporting Date : 19/8/2023

Reporting No. : 04-4

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



Max dry density (gm/cm²)

: 2.15

Optimum moisture content %

: 6.4 %

Signature /

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Zamalek, Cairo.

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٢ شريطماك الافتدار الزمالك الناهرة الفون « فلكس ٢٧٣١ / ٢٠٢٠ ٤٢٠١٤



شركة الذهبي: Company Name

: Electric Express Train - HSR From Qous To Armant Project

: (ST: 641+500) E= 492410,088 N=2862759,57 Location

Type of sample : Soil Embankment

Delivery Date : 14/8/2023 Reporting Date : 19/8/2023

: 04-4 Reporting No.

Test Results of California Bearing Ratio on Base Materials

ASIM D 100.	
etration	stress on piston (Mpa)
Inch	
0.025	0.75
0.050	1.52
0.075	2.23 -
0.100	2.99
0.125	3.65
0.150	4.21
The second secon	4.67
	4.97
0.250	5.07
	Inch 0.025 0.050 0.075 0.100 0.125 0.150 0.175 0.200

CBR Result	Stress (Mpa)		CBR 100 %	
New York and the second	St. Value	Sample results	43.4 %	
At 0.1 inch (2.54 mm) penetration	6.90	2.99	45.4 /0	

Notes:

Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of = 2.15 (gm /cm³) At = 6.4 % optimum water content.

3- Surcharge load 4.50 Kg

4- CBR > 10 for middle-and lower embankments according project spec page No 35.

Signature / ACONTAIN

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Te& Fax 27367231 - 27363093

٢ ش المالد الافسان الزمالات النامرة البلين - فاكس - ۲۷۴۹۷۲۲۲ مع ۲۷۴۹۳۴



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : (ST: 641+500) E= 492410,088 N=2862759,57

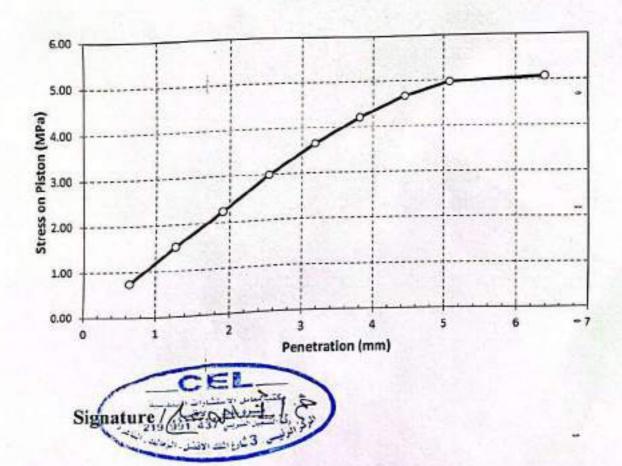
Type of sample : Soil Embankment

Delivery Date : 14/8/2023 Reporting Date : 19/8/2023

Reporting No. : 04-4

Load Penetration Curve of CBR Test

ASTM D-1883



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Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 03/09/2023

Soil type

: Middle Embankment

Location

: St From 641+000 To 641+160

Level

: - 1.75 M

Report No.

: 52

Compaction test by using Sand - Cone Test Method ASTM D- 1556

Test#	Station	Test Hole Volume cm³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance e
1	641+030	1644	2.29	5.5	2.17	98.4%	Comply
2	641+060	1058	2.22	5.3	2.11	95.8%	Comply
3	641+090	1065	2.23	5.5	2.12	96.3%	Comply
	641+120	1404	2.20	5.5	2.09	95.0%	Comply
4	0417120		0.00	53	2.09	95.0%	Comply
5	641+150	1647	2.20	5.3	2.09	95.0%	- 0

Degree of compaction based on proctor test dated At :

Max. dry density =2.20 gm/cm³

At optimum moisture content = 6.4 %

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Signature / Cool Lie

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۲ ش الملك الافضل الزماك - الفاهرة البنون + عاكس - ۲۷۳۲۷۲۲۲ و ۲۷۳۲۴



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 24/08/2023

Reporting Date : 28/08/2023

Reporting No. : 10

Dear Gentleman,

Attached here with the delivered on 24 / 8 / 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.

Soil classification according to Project Specs.

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 / Constitution Survey & Literatures

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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 24/08/2023 Reporting Date : 28/08/2023

Reporting No. : 10

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100
37.5	1.5	98.4
25	1	92.3
19	3/4	89.1
12.50	1/2	80.6
9.50	3/8	70.6
4.75	4	59.4
2.00	10	40.9
0.425	40	25.1



3 El Malek El Aldal Street Zamalek, Cairo. Tel8 Fax: 27367231 - 27353093



۷ ش المالد الأضنل . الزمالات التاهية تايفروج، هاكس : ۲۷۲۹۲۰۱۲۲



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 24/08/2023 Reporting Date : 28/08/2023

Reporting No. : 10

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)	12.5





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant -

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 24/08/2023 Reporting Date : 28/08/2023

Reporting No. : 10

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

Test	Results (%)
Liquid Limit	0
Plastic Limit	0
Plasticity Index	0

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٢ش الماك الأشتيل الزمالك - التأمرة المنزيز - فكس - ١٣٠٦٢/٢١ - ٢٠٣٦٢-١٢



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

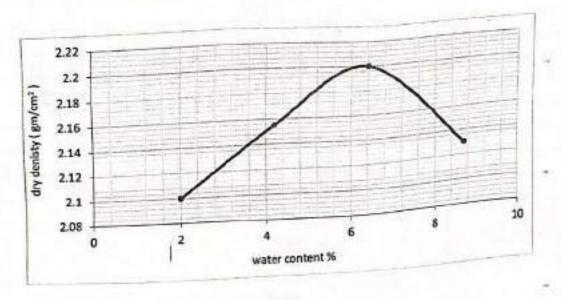
Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 24/08/2023 Reporting Date : 28/08/2023

Reporting No. : 10

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



Max dry density (gm/cm²)

: 2.20

Optimum moisture content %

: 6.4 %

Signature /

م مسجد السويد (531 - 531 - 531) التي المشارع الملك الأفرال . المراالك

3 El Malek El Afdal Street Zamalek, Cairo.

Teå Fax: 27367231 - 27363093

IAS ACCREDITED عمل الهذاك الاغتسال الراضاك المنافعة المنافعة المنافعة المنافعة المنافعة المنافعة المنافعة (١٧٠١-١٩٢١ -١٧٠-١٩٢



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 24/08/2023 Reporting Date : 28/08/2023

Reporting No. : 10

Soil Classification

TEST	Results (%)	Limits according * Projects Specs			
Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)	
2.00 mm (No.10).	40.9	Max 50 %			
0.425 mm (No. 40).	25.1	Max 30 %	Max 50 %		
0.075 mm (No. 200).	12.5	Max 15 %	Max 15 %	Max 15 %	
Liquid Limit					
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %	

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

Signature January Company of the State of th

3 El Malek El Afdat Street Zamatek, Cairo.

Te& Fax: 27367231 - 27353093



۲ش البلك الأفضل الزمالت القامرة البيان ۱۹۲۲-۲۰۰۲ (۱۹۲۲



شركة الذهبي: Company Name

: Electric Express Train - HSR From Qous To Armant Project

: ST:641+400 E= 492410,088 N=2862759,57 Location

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 24/08/2023

Reporting Date : 28/08/2023

Reporting No. : 10

Test Results of California Bearing Ratio on Base Materials

ASTM D 1883

pend	etration	stress on piston (Mpa)
mm	Inch	stress on piston (wpa)
0.64	0.025	0.30
1.27	0.050	1.42
1.91	0.075	2.43
2.54	0.100	3.45
3.18	0.125	4.41
3.81	0.150	5.12
4.45	0.175	5.73
5.08	0.200	6.04
6.35	0.250	6.24

CBR Result	St	CBR 100 %	
At 0.1 inch (2.54 mm)	54 mm) St. Value Sample results		50 %
penetration	6.90	3.45	30 74

Notes:

Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of = 2.20 (gm/cm³) At = 6.4 % optimum water content.

3- Surcharge load 4.50 Kg.

4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature / ..

3 El Malek El Afdal Street Zamalek, Cairo.

Tel& Fax: 27367231 - 27363093



الإشار الوالد الأشليل الزمال النافرة البليد و ماكين المجاورة و جوء وجوء



شركة الذهبي : Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

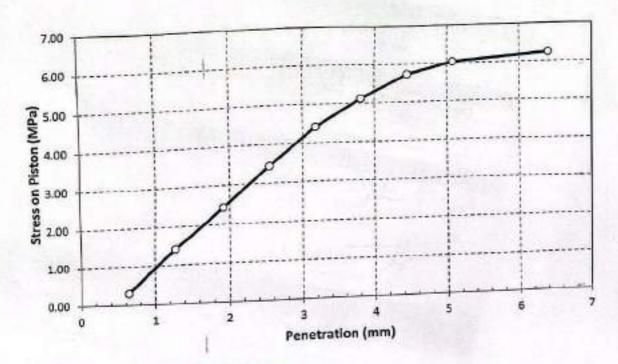
Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 24/08/2023

Reporting Date : 28/08/2023

Reporting No. : 10

Load Penetration Curve of CBR Test ASTM D-1883





3 El Malek El Afdal Street Zamalek, Cairo.

Telá Fax : 27367231 - 27363093



عمل الطالب الافتشل الزمانة الناصرة تليدور طائف ٢٧٣٦٢٢٠٤٢ ١٧٣٦٢٠٠



Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 07/09/2023

Soil type

: Middle Embankment

Location

: St From 641+160 To 641+300

Level

: -2 M

Report No.

: 58

Compaction test by using Sand - Cone Test Method ASTM D-1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptanc e
1	641+180	1792	2.25	5.5	2.13	96.6%	Comply
2	641+230	1698	2.24	5.3	2.13	96.3%	Comply
3	641+260	1374	2.25	5.5	2.14	96.6%	Comply
4	641+290	1058	2.22	5.5	2.10	95.1%	Comply

Degree of compaction based on proctor test dated At :

Max. dry density =2.21 gm/cm³

At optimum moisture content = 6.4 %

Signature / CF/

3 El Malek El Afdal Street

Zamolek, Caro.

Te8 Fox :27367231 - 20363093

IAS

* في الطلب الإفريش الرحالات القامرة عليمور ١ هاكس ١ ١٩٣٦٤ - ١٩٣٦٤ و١



Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 31/08/2023 Reporting Date : 04/09/2023

Reporting No. : 10-2

Dear Gentleman,

Attached here with the delivered on 31 / 8 / 2023

This sample is representative for 5.000 M3

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.

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

المجال ا



Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 31/08/2023

Reporting Date : 04/09/2023

Reporting No. : 10-2

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size	Sieve Size (IN)	Passing %
50	2	98.6
37.5	1.5	96.1
	1	91.3
25	3/4	87.2
19	1/4	79.2
12.50	3/8	71.2
9.50	4	56.9
4.75	10	41.2
2.00	40	28.2
0.425		



3 El Malek El Afdal Street Zemalek, Cairo.

Te.& Fax: 27367231 - 27363093



على الملك الأمشل الرماك : الزاهرة المور" : الكس : ١٩٣١٤/١٤ - ١٥٠١٢/١٢ -



شركة الذهبي: Company Name

Project : Electric Exp

: Electric Express Train - HSR From Qous To Armant -

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 31/08/2023 Reporting Date : 04/09/2023

Reporting No. : 10-2

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)	11.9

Signature / La Consulting Engineering Bureau & Laburascories

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3 Et Malek El Afdal Street Zarvotek, Cairo.

Telà Fax: 27367231 - 27363093



التي الملك الأفتشل الزماك القاهرة شغير - فاكس (١٩٤١-١٩٤١ - ١٩٠٢-١٩٠٢



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 31/08/2023 Reporting Date : 04/09/2023

Reporting No. : 10-2

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

Test	Results (%)
Liquid Limit	Max 50 % 0
Plastic Limit	O O
Plasticity Index	0

Signature روس المسلم ا





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

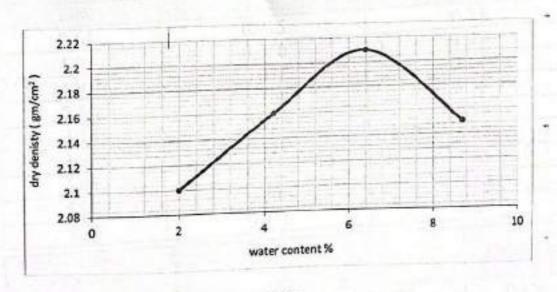
Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 31/08/2023 Reporting Date : 04/09/2023

Reporting No. : 10-2

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



Max dry density (gm/cm²)

: 2.21

· Optimum moisture content %

: 6.4 %

Signature / .

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ا ش العلك الأبيشل الزمالك - القاهرة اليفون - هاكس - ١٩٣٦/٢٠١٢ - ٢٧٣٦٢-٢٢



مكتب معامل الإستشارات الهندسية

شركة الذهبي: Company Name

: Electric Express Train - HSR From Qous To Armant Project

: ST:641+400 E= 492410,088 N=2862759,57 Location

: Soil Embankment (Upper Embankment 0.0 M) Type of sample

: 31/08/2023 Delivery Date Reporting Date : 04/09/2023

Reporting No. : 10-2

Test Results of California Bearing Ratio on Base Materials

	ASTM D 1883	
pene	etration	stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.33 -
	0.050	1.47
1.27	0.075	2.54
1.91	0.100	3.55
2.54		4.51
3.18	0.125	5.27
3.81	0.150	5.83
4.45	0.175	
5.08	0.200	6.14
6.35	0.250	6.29

CBR Result	Stress (Mpa)		CBR 100 %	
STATE OF THE PARTY.	St. Value	Sample results	51.5 %	
At 0.1 inch (2.54 mm) penetration	6.90	3.55		

Notes:

Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of = 2.21 (gm /cm³) At = 6.4 % optimum water content.

3- Surcharge load 4.50 Kg.

4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature / Ser

3 El Malen Er Major Streeter Zamalek, Caro. Te& Fax: 27367231 - 2735



٢ ش المثان الأفيتيل الزوالك التلمرة المنفون - فاكس: ١٦٢١٧٢١ - ٢٠٦٢٠٢٢١



Project : Electric Express Train - HSR From Qous To Armant

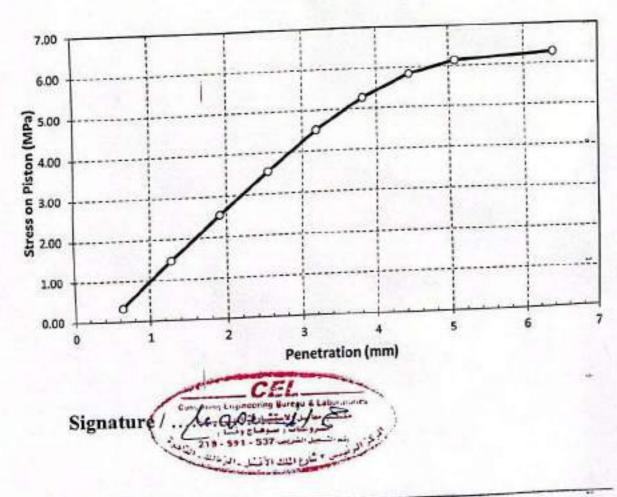
Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 31/08/2023 Reporting Date : 04/09/2023

Reporting No. : 10-2

Load Penetration Curve of CBR Test ASTM D-1883



3 El Malek El Afdal Street Zemalek, Cairo. Te& Fex: 27367231 - 27363093



۷ ش العلك الأفضال الزمالك - القاهود اليفون + فلكس + ۲۷۳۲۷ - ۲۷۳۲۲ و ۲۷۳۲۲



Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 12/09/2023

Soil type

: Middle Embankment

Location

: St From 641+160 To 641+300

Level

: -2 M

Report No.

: 58

Compaction test by using Sand - Cone Test Method **ASTM D-1556**

Test #	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance e
1	641+180	1792	2.25	5.5	2.13	97.0%	Comply
2	641+230	1698	2.24	5.3	2.13	96.8%	Comply
3	641+260	1374	2.25	5.5	2.14	97.1%	Comply
4	641+290	1058	2.22	5.5	2.10	95.6%	Comply

Degree of compaction based on proctor test dated At :

- Max. dry density =2.20 gm/cm3
- At optimum moisture content = 6.4 %

3 El Malek Bi Mosi Streep 91 - 937 Zamalek, Cairo. Te & Fax: 27367231 - 27363093

JANTON LAND الزمالك التلعرف TATTE - ST- EXTERNAL SURGE SUPPLY



Project : Electric Express Train - HSR From Qous To Armant -

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 7/09/2023

Reporting Date : 11/09/2023

Reporting No. : 10-3-2

Dear Gentleman.

Attached here with the delivered on 7/9/2023

This sample is representative for 5.000 M3

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.
- 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

3 El Malek El Aldal Street

Te& Fax: 27367231 - 27363063

Zamalek, Cairo.

Ž.





Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 31/08/2023 Reporting Date : 04/09/2023

Reporting No. : 10-2

Soil Classification

TEST	Results (%)	The state of the s	nits accord	
Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	41.2	Max 50 %		
0.425 mm (No. 40).	28.2	Max 30 %	Max 50 %	
0.075 mm (No. 200).	11.8	Max 15 %	Max 15 %	Max 15 %
Liquid Limit				
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

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

Signature Consultant Consultant State of Laboration Consultant Con

3 El Malek El Afdal Street Zamalek, Cairo.

Tell Fax: 27367231 - 27363093

ACCREDITED

٢ ش العلك الأفضل الرماك القاهرة اليفون ، الكامر : ١٩٣٦/٢٢١ ، ١٤٣٦٢ و



Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 7/09/2023

Reporting Date : 11/09/2023

Reporting No. : 10-3-2

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	98.1
37.5	1.5	95.3
25	1	90.1
19	3/4	84.2
12.50	1/4	77.2
9.50	3/8	71.5
4.75	4	59.9
2.00	10	46.3
0.425	40	28.0

3 El Malek El Afdal Street Zamalek, Cairo.

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۲ش العلاد الأفيشل الزمالات الماهوة المهور ماكس ٢٧٣٦٧٠٠١٠ ٢٧٣٦٢ ٢٧٢٦٢



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 7/09/2023

Reporting Date : 11/09/2023

Reporting No. : 10-3-2

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)	9.6	

Signature / ... Signature / ..





Project

: Electric Express Train - HSR From Qous To Armant : ST:641+400 E= 492410,088 N=2862759,57 Location

: Soil Embankment (Upper Embankment 0.0 M) Type of sample

Delivery Date : 7/09/2023 Reporting Date : 11/09/2023

Reporting No. : 10-3-2

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

Test	Results (%)
Liquid Limit	Max 50 72 0
Plastic Limit	0 10 15 15 15 15 15 15 15 15 15 15 15 15 15
Plasticity Index	0

Signature /.





شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 7/09/2023 Reporting Date : 11/09/2023

Reporting No. : 10-3-2

Soil Classification

TEST	Results (%)	SHIP	rojects Spec	
Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	46.3	Max 50 %		
0.425 mm (No. 40).	28.0	Max 30 %	Max 50 %	
0.075 mm (No. 200).	9.6	Max 15 %	Max 15 %	Max 15 %
Liquid Limit				
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %

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

Signature /

د المحالية المحالية

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



٢ ش المحلك الأفضل الرماك الماهود المعون - فأكس : ٢٧٣٦٢-٢٧- ٢٧٣٦٢



شركة الذهبي : Company Name

Project : Electric Express Train - HSR From Qous To Armant

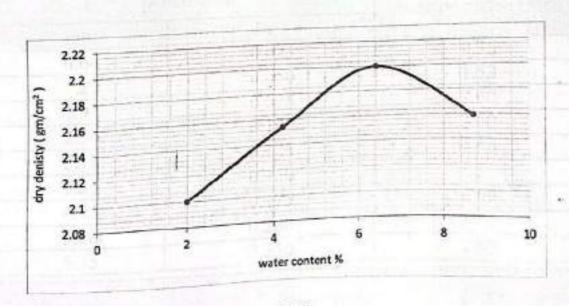
Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 7/09/2023 Reporting Date : 11/09/2023

Reporting No. : 10-3-2

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



Max dry density (gm/cm²)

: 2.20

Optimum moisture content %

: 6.4 %

Signature /

و المسلمان المسلمان

3 El Malek El Afdat Street Zamalsk, Cairo.

Tel& Fax: 27367231 - 27363093



* ش العلك الافتخار الزهائل القاهرة الرهين - بماكس (١٣٣٦/١٢٠١)



شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 7/09/2023

Reporting Date : 11/09/2023

Reporting No. : 10-3-2

Test Results of California Bearing Ratio on Base Materials

	A51W1D 100	
p	enetration	stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.36
1.27	0.050	1.52
1.91	0.075	2.60
2.54	0.100	3.60
3.18	0.125	4.56
3.81	0.150	5.31
4.45	0.175	6.09
5.08	0.200	6.56
6.35	0.250	7.02

CBR Result	St	CBR 100 %	
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	52.1 %
	6.90	3.60	2510.00

Notes:

Attached graph shows penetration resistance versus penetration magnitude.

2- The sample was compacted to dry density of = 2.20(gm/cm³) At = 6.4 % optimum water content.

3- Surcharge load 4.50 Kg.

4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature / .

3 El Malek El Afdal & Zamalek, Cairo.

Te & Fax: 27367231 - 27363093

ACCREDITED

* شرالطك الابتشاق الزماك : القاهرة اليفون : فاكس : ٢١٣٦١/٢١١ -٢٢٢٢،٩١٠



Company Name

شركة الذهبي:

Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 16/09/2023

Soil type

: Middle Embankment

Location

: St From 641+200 to 641+300

Level

: -1.5 M

Report No.

: 63

Compaction test by using Sand - Cone Test Method ASTM D-1556

Test#	Station	Test Hole Volume cm ³	Bulk Density gm/ cm ³	Moisture Content %	Dry Density (gm/ cm³)	Degree of Compaction (%)	Acceptance
1	641+220	1826	2.24	6	2.11	95.9%	Comply
2	641+240	1440	2.23	6.4	2.10	95.2%	Comply
3	641+260	1633	2.23	6	2.11	95.7%	Comply
4	641+280	1042	2.28	5.8	2.16	98.1%	Comply

Degree of compaction based on proctor test dated At

:Max. dry density =2.19 gm/cm3

At optimum moisture content = 6.

Signature

3 El Malek El Atdal Street Zamalek, Cairo.

Te& Fax: 27367231 - 27363093



ا ش العلك الاعتمال الزمالك الناهرة نايفون (فاكس : ٢٠٢٢ ١٢٠٢ ٢٠٢٢



Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 08/09/2023 Reporting Date : 12/09/2023

Reporting No. : 10-4

Dear Gentleman,

Attached here with the delivered on 12/9/2023

This sample is representative for 5.000 M3

Materials test

ignature 1

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

3 El Malek El Aldal Street Zamalek, Cairo.

النك الأفضل والومالك

Tel& Fax: 27367231 - 27363093



۴ش العلك الأفضل الزمائك - القاهرة تليس ، فاكس - ۲۹۳۲۷۳۲ - ۲۱-۲۷۳۲۲



Project : Electric Express Train - HSR From Qous To Armant

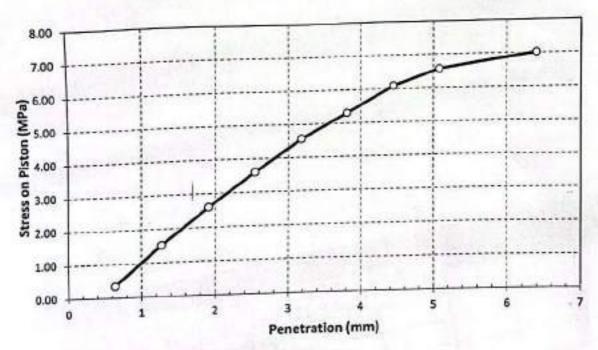
Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 7/09/2023 Reporting Date : 11/09/2023

Reporting No. : 10-3-2

Load Penetration Curve of CBR Test ASTM D-1883



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شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 08/09/2023 Reporting Date : 12/09/2023

Reporting No. : 10-4

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

Test	Results (%)
Liquid Limit	0
Plastic Limit	0 15 2
Plasticity Index	0



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Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 08/09/2023 Reporting Date : 12/09/2023

Reporting No. : 10-4

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	98.1
37.5	1.5	95.3
25	1	89.4
19	* Tun 3/4	84.4
12.50	1/4	77.7
9.50	3/8	73.3
4.75	4	58.4
2.00	10	45.9 -
0.425	40	27.5



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لاش الطلب الأفشيل . التحلك الشاهرة التحور - فاكس : ۲۷۳۲۲۰۹۲-۲۷۳۲۲



Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 08/09/2023 Reporting Date : 12/09/2023

Reporting No. : 10-4

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)	9,9







مكتب معامل الإستشارات الهلدسية

شركة الذهبي: Company Name

: Electric Express Train - HSR From Qous To Armant Project

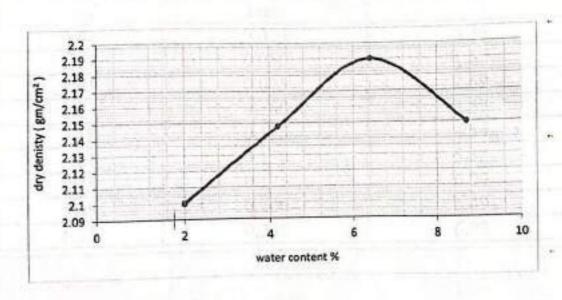
: ST:641+400 E= 492410,088 N=2862759,57 Location

: Soil Embankment (Upper Embankment 0.0 M) Type of sample

: 08/09/2023 **Delivery Date** : 12/09/2023 Reporting Date

: 10-4 Reporting No.

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



Max dry density (gm/cm²)

: 2.19

Optimum moisture content %

: 6.4 %

Signature /-

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Consulting Engineering Bureau & Laboratories مکتب معامل الإستشارات الهندسية

شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 08/09/2023 Reporting Date : 12/09/2023

Reporting No. : 10-4

Test Results of California Bearing Ratio on Base Materials

	ASTM D 188	3
pen	etration	stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.36 -
1.27	0.050	1.52
1.91	0.075	2.59
2.54	0.100	3.59
3.18	0.125	4.54
3.81	0.150	5.33
4.45	0.175	6.09
5.08	0.200	6.49
6.35	0.250	6.92

CBR Result	St	ress (Mpa)	CBR 100 %
At 0.1 inch (2.54 mm)	St. Value	Sample results	52 %
penetration	6.90	3.59	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.19(gm/cm³) At = 6.4 % optimum water content.

3- Surcharge load 4.50 Kg.

4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature

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Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 08/09/2023 Reporting Date : 12/09/2023

Reporting No. : 10-4

Soil Classification

TEST	Results (%)	Limits according Projects Specs			
Group Classification	(A-1-a)	(A-1-a)	(A-1-b)	(A-2-4)	
2.00 mm (No.10).	45,9	Max 50 %		*****	
0.425 mm (No. 40).	27.5	Max 30 %	Max 50 %		
0.075 mm (No. 200).	9.9	Max 15 %	Max 15 %	Max 15 %	
Liquid Limit	I				
Plasticity index	0	Max 6 %	Max 6 %	Max 10 %	

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

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شركة الذهبي: Company Name

Project

: Electric Express Train - HSR From Qous To Armant

Location

: ST:641+400 E= 492410,088 N=2862759,57

Type of sample

: Soil Embankment (Upper Embankment 0.0 M)

Delivery Date

: 08/09/2023

Reporting Date

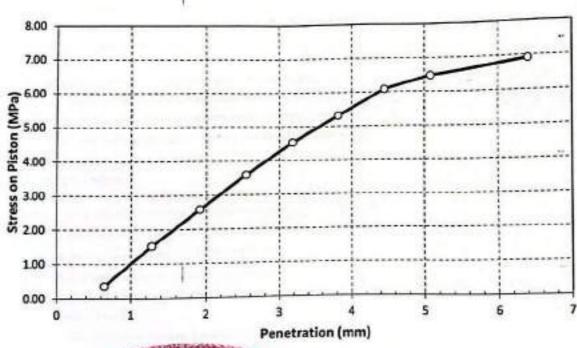
: 12/09/2023

Reporting No.

: 10-4

Load Penetration Curve of CBR Test

ASTM D-1883



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Report

- 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

: Original earth

Job requiremer: Ev2 > 40 MPa

Nem (St. 1988)	Descriptions
Type of bedding material below the plate	Natural Soil
Plate Diameter (mm)	309
date of measurement	:16/09/2023
Unusual observation made during test	NO
Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

	Sto	tion	. EA.	Level	First Cyclo	Second Cycle	Eval Evi
Test No.	From	То	Location	(m)	Evi (MPa)	Evz (Mpa)	Ratio
1		841+300	841+240	-1.5	33.9	140.7	4.15



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Company

شركة الذهبى للمقاولات والتوريدات السومية و

: Electric Express Train - Sector (5) - Qous to Arment.

Project Subject

: Determine the deformation and strength characteristics of soil by the

plate loading test according specifications DIN 18134:2012-04 and project requirements 641+200 to 641+300

Test Location Station

: Station

Level

641+240 -1.5

Test Date

: 10/09/2023

Repot Date

: 19/09/2023 : Original earth

Type of soil

Report No.

Dear Gentlemen,

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

Apparatus

- 1. Loading plates consists of two plates with 300 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 streightedges with magnetic supports to fixed the dial gauges.
- 5. Hydraulic lack with pump to transfer reactive loads to the loading plates
- 8. Dial indicator measuring device with scale capacity 700 Bar (Enertiac)
- Reaction loading system by roller compactor with weight approximately 15 ton.
- Calibration certificates are attached.

Test Procedure:

- 1. Clean the ground on test area to the required level with undaturbed soil
- 2. Install loading plates 300 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
- For a 300 mm loading plate, the limit values are 5.0 kg/cm.
- 6. The load shall be applied in aix 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.
- Following unleading, a further (2 **) leading 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 lead 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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Company Name

شركة الأهبى المقاولات و الثوريدات الصومية :

Project

: Electric Express Train - Sector (5) - Qous to Arment.

Test Date

: 16/09/2023

report date Station

: 19/09/2023 641+240

Test No.

:1

Nonrepetitive Static Plate Load Tests of Soils DIN 18134

oading	Stage (1)		Settlement		Settlement	Average
Loading	oading Stress Kg/cm2	Dial 1		Dial 2	mm	
3.5		mm		0.00	0.00	
0	0.00	20.00	0.00	19.21	0.79	0.74
1	0.83	19.30	0.70		1.45	1.40
2	1.66	18.65	1,35	18.55	2.14	2.06
2	2.50	18.03	1.97	17.86	2.65	2.50
-	3.33	17.65	2.35	17.35	2.82	2.87
4	4.17	17.08	2.92	17.18	3.80	3.64
9	5.00	16.53	3.47	16.20	3.00	10000

Unloadin	g Stage ()	-	Settlement	88.C-38.L	Settlement	Average
	Stress	Dial 1		Dial 2	mm	Menage
Loading	Kg/cm2		mm	16.33	3.67	3.02
4	2.50	17.63	2.37	16.58	3,42	2.84
- 1	1.25	17.75	2.25	17.08	2.92	2.49
	5.405	17.95	2.06	A7.U0		

CHI-CHILD CO.	The second second	1000
Loading	Stage	61

Loading S	Stage (2)		- 141	Service Co.	Settlement	Average
Loading	Stress	Dial 1	Settlement	Dial 2	mm	Average
	Kg/cm2		mm	16.83	3.17	2.68
0	0.83	17.62	2.18	1662	3.35	2.80
simalely equ	1.68	17.78	2.22	1002		200
stres	s is reache	d.		16.45	3.55	2.96
2	2.50	17.64	2.36	1631	3.69	3.06
3	3.33	17.58	2.42	100000	3.89	3.23
	4 17	17.43	2.57	16.12		



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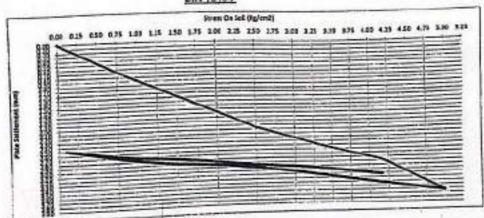
Company Name Project Test Dale report date Station Test No.

شركة الأهبى للمقاولات والتوويدات العبرسية : : Electric Express Train - Sector (5) - Qous to Arment,

: 16/09/2023 1 10/08/2023 641+240

:1

Nonrepetitive Static Plate Load Tests of Soils DIN 18134



1.30

			_			5	- 6
Loading (1)	0	1	2	3	-	22.00	3532.5
	-	510	1172.8	1766.3	2352,6	2946.1	2700
Stage(Kg)	0	200	1.00	2.50	3.33	4.17	5.00
Strees (Kg/cm2)	0.00	0.83	1,00	0.04	2.50	2.27	3.84
distances from	0.00	0.74	1.40	2.01	2.00		-

UnLoading (1)	1	2	3	4
Stege(Kg)	3533	1796	884	71
Stress (Kg/cm2)	5.00	2.50	1.250	0.10
Settlement (mm)	3.64	3.02	2.84	2.49

and I		51 (mm)*	1.27	\$10mm)#	2.67	AS =		
D (mm) = 309 Ev1 (NPs) = 10.75°D	-Auyus	3. (33.9	7				
	-		2	3	4	- 5		
Loading (2)	0	586,391	11728	1766.3	2352.6	2946.1		
Stage(Kg) Stress (Kg/cm2)	0.10 0.63				1.68	2,50	3,33	4.17
Settlement (mm)			2.50	2.95	3,16	3.23		

Settlement	(mm)	2.49	2.68	2.00	24			
D (mm) *	100	1	\$1 (mm)*	271	ED(mri)*	109	nx =	0 11
E-S MF4	_	_		140.7				

Ev2Ev1= 4.15

Evi = blodulus of deformation during the leading stage. Ext = Madulus of deformation furing the Relateding stage.

D . Pleis diameter (mm)

Do = The difference between 0.3 and 0.7 from the maximum loading (emix) (hg/cm²) 0.5 = Difference in sufficients corresponding to 0.3 and 0.7 from the maximum loading (mm)



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مكتب معامل الإستشارات الهندسية

شركة الذهبي: Company Name

Project

: Electric Express Train - HSR From Qous To Armant

Testing Date

: 21/09/2023

Soil type

: Middle Embankment

Location

: St From 641+000 to 641+200

Level

: -1.5 M

Report No.

: 67

Compaction test by using Sand - Cone Test Method **ASTM D-1556**

Station	Test Hole Volume cm ³	Bulk Density am/ cm ³	Moisture Content %	Dry Density (gm/ cm ³)	Degree of Compaction (%)	Acceptance
641+025			5.8	2.12	96.7%	Comply
	-	2.21	5.8	2.09	95.3%	Comply
		2.26	6.4	2.12	97.0%	Comply
Charles and Charles	100000000000000000000000000000000000000	12500000	6	2.11	96.2%	Comply
- Control of the control of	52/300,000	770-000	5.8	2.17	99.1%	Comply
No. of the second			5.5	2.12	97.0%	Comply
			5.6	2.16	98.7%	Comply
GOVERNOUS III			5.8	2.12	96.7%	Comply
	Station 641+025 641+050 641+075 641+095 641+115 641+140 641+166	Station Volume cm³ 641+025 1599 641+050 1571 641+075 1435 641+095 1392 641+115 1070 641+140 1690 641+166 1267	Station Volume cm³ Density gm/ cm³ 641+025 1599 2.24 641+050 1571 2.21 641+075 1435 2.26 641+095 1392 2.23 641+115 1070 2.30 641+140 1690 2.24 641+166 1267 2.28	Station Volume cm³ Density gm/ cm³ Content % 641+025 1599 2.24 5.8 641+050 1571 2.21 5.8 641+075 1435 2.26 6.4 641+095 1392 2.23 6 641+115 1070 2.30 5.8 641+140 1690 2.24 5.5 641+166 1267 2.28 5.6	Station Volume cm³ Density gm/ cm³ Content % (gm/ cm³) 641+025 1599 2.24 5.8 2.12 641+050 1571 2.21 5.8 2.09 641+075 1435 2.26 6.4 2.12 641+095 1392 2.23 6 2.11 641+115 1070 2.30 5.8 2.17 641+140 1690 2.24 5.5 2.12 641+166 1267 2.28 5.6 2.16	Station Volume cm³ Density gm/ cm³ Content % (gm/ cm³) Density (gm/ cm³) Compaction (%) 641+025 1599 2.24 5.8 2.12 96.7% 641+050 1571 2.21 5.8 2.09 95.3% 641+075 1435 2.26 6.4 2.12 97.0% 641+095 1392 2.23 6 2.11 96.2% 641+115 1070 2.30 5.8 2.17 99.1% 641+140 1690 2.24 5.5 2.12 97.0% 641+166 1267 2.28 5.6 2.16 98.7%

Degree of compaction based on proctor test dated At

:Max. dry density =2.19 gm/cm³

At optimum moisture content = 6

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Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 08/09/2023 Reporting Date : 12/09/2023

Reporting No. : 10-4

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)	9.9

Signature /...



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اش العلدالاندىل. الرماك الدنفور غيفور دفائض (١٩٣١/١٢١ (پ.١٩٣٩))



Consulting Engineering Bureau & Laboratories مكتب معامل الإستشارات الهندسية

شركة الذهبي: Company Name

Project : Electric Express Train - HSR From Qous To Armant

Location : ST:641+400 E= 492410,088 N=2862759,57

Type of sample : Soil Embankment (Upper Embankment 0.0 M)

Delivery Date : 08/09/2023 Reporting Date : 12/09/2023

Reporting No. : 10-4

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

Test	Results (%)
Liquid Limit	Marsan o
Plastic Limit	About to Oak
Plasticity Index	0



محضر اعتماد حصر كميات



الكاريخ :15/10/2023 اسم المشروع بمشروع القطار الكهريائي السريع (5الكتوبر -اسوان -ابوسميل)الفطاع الخامس

قامت شركة برليانت كونلت للاستشارات الهنسية المسلمية (استشارى الاعمال المسلمية لهيئة الطرق والكباري)

باعضاد الكميات المنفذة الخاصة بشركة الذهبى للمقار لات

البلاحظات	الكنية بالنكر النكح	المشيف	الي المنطة رام	من المحطة رقم	4
اعدال ردم على (REV05)	24219.3	اعمال الودم	641+240	641+000	1
	24219.3		بثى الكبية	al	

حصر جاری (1) المرفقات : استلام منزانیة شبکیة قطاعات عرضیة شیت اکسیل موضح یه الکمیات

استثماری / سکتب سیکار م

Constitution of the consti

استشارى المسلحة / مكتب ير اليانت

مهلاس الثبركة المنفذة

برابات كاكل بر Blue Line - sec. 05 استان الاعسال نا مبا بالنطاع برلبات هناست الاحسال المالية HSR- Blue Line - sec. 05



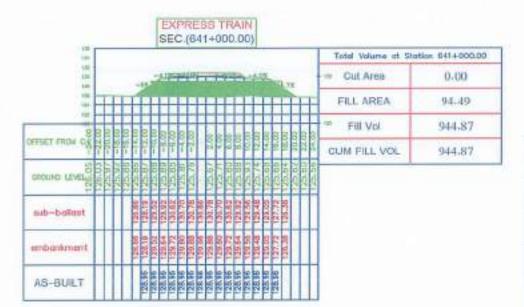
حصر كميات الردم مستخلص جاري (1) شركة الذهبي (1) مركة الذهبي (1) المريع القطاع (637+952-643+863) مشروع القطار السريع القطاع الخامس (قوص /ارمنت)

		THE PERSON NAMED IN COLUMN	CONTRACTOR OF STREET
Station	Fill Area (Sq.M.)	Fill Volume (Cu.M.)	Cum. Fill Vol. (Cu.M.)
641+000.00	94.49	944.87	944.87
641+020.00	95.4	1,898.90	2,843.77
641+040.00	95.55	1,909.51	4,753.27
641+060.00	94.56	1,901.11	6,654.38
641+080.00	94.19	1,887.53	8,541.91
641+100.00	90.48	1,846.67	10,388.58
641+120.00	100.47	1,909.43	12,298.01
641+140.00	92.09	1,925.51	14,223.52
641+160.00	89.85	1,819.36	16,042.88
641+180.00	89.88	1,797.28	17,840.16
641+200.00	92.52	1,824.02	19,664.17
641+220.00	117.16	2,096.84	21,761.01
641+240.00	128.67	2,458.27	24,219.28
المتر المكعب	اجمالي الكمية ب	24	219.3



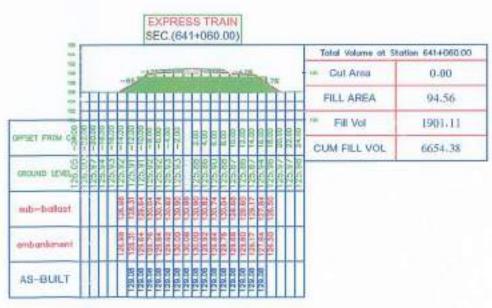
برليات كرست المسلم المسلم HSR- Blue Line - sec.05



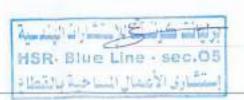


107																		Total Volume	at St	otion #41+040.00
94			-55	-	-	T.	in.	E			-	ð		-	1.7			= Got Area		0.00
100	H	Н	1	H		F		F		H				+		H	Ŧ	FILL ARE	A.	95.55
8	888	00	1 3	8	2 0	g	q	,			0	0	9 6		0	2 5		= Fil Vol		1909.51
WESET FROM CA	984	7	-	-100		1	2	2	4.00	ď	0.0	198			0		100	CUM FILL V	OL.	4753-27
mannin marië	120 and 1	125.93		125,91	125.50	1255.53	125.84	125.85	125.62	125.70	125.77	Sept.	1	1	50000	285.73	255.AU			
sub-balast			128.20	128.60	30.00	120,76	30.06	130.86	130.76	130.70	130.00	128.04	120.56	100.00	120,46					
embenkment			C III	128.60	125.60	128.00	120.06	128.86	25,00	120.80	128.72	38.54	129,56	197.60	126.46					
AS-BULT	T		20.04	10.04	129.04	1000	129.04	1080	20.04	*0.65	*1187	+0787	129.04	20.04			T			

EXPRESS TRAIN SEC (641+020,00) Total Volume at Station 641+020:00 Cut Area 0.00 FILL AREA 95,40 1898-90 Fill Vol. OFFSET FROM COM FILL VOL 2843.77 SHOUND LEVEL md-bolost umbankment AS-BUILT









<u>Owner</u> Ministry of Transportation National Authority for Tunnels (NAT)

Owner

Geraral Authority for Boxio , Britgesiffand Transport

Project Manne ELECTRIC EXPRESS TRAIN (HIGH-SPIED HAIL) SECTION (FROM CASS TO ARSANNT) STATION 638-110 LB - STATION 715-634.63

KEY PLAN



SECTION (FROM 05.5 TO ARMANT	
STATION 529+120:15 - STATION 713+8	24.6

	205001	PERSONAL PROPERTY OF STREET	the state of the s
549	308	Otroling femile	-03
	altern	presented	Amediani:

*All dimensions are in meters

List of cross-sec Expression

	Essisting Traumi Lacel
_	Progoced Sub-Asilisational



With T Consultant

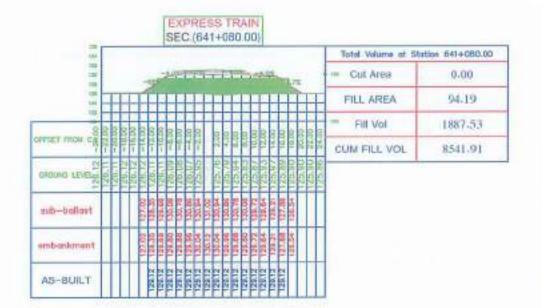




Contractor EL-ZAHABY (Z)

ross-sec for HSR OCTOBRE - ASWAN section EL-ZAHABY COMPANY from km 637+952 to 643+863

Drawing NO HSR - SEC 5 - cross-sec- (1)



EXPRESS TRAIN

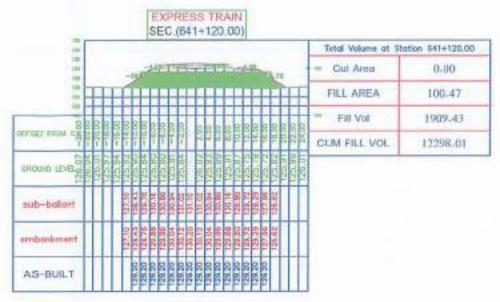
SEC.(641+100.00)

GROUND LEVE

sub-ballast

embonliment

AS-BUILT



	10	Γ	ī			_	_		_		-	risere	_	_		_	0	_	_	_	_	7		П	Total Volume at Station 641+140.0		
	2 2 2	l				-	15	à	Ø	3	23	1 5	die	E	ш	2	d	ш	X,	18	Los	2			- Out Area	0.00	
	(00 (04	F			F	r	ĺ		ı			Ŧ	ľ	ľ	F										FILL AREA	92.09	
OFFSET FROM	9500	20,000	diam'r.	000	18.00	19,00	2.50	0070	0.00	6.00	4,000	20.00	907	4.00	000	007	20.00	2.00	90%	100	5.00	90'0	2.00	4.000	Fill Vol	1925-51	
and the second	100	1 8	1.0	0.01	9	- IM	1	0	- 1497	1 000	ŧ	2	F	R		17.1	10.5	100	N		100	200	0	0	CUM FILL VOL	14223.52	
ENGIND TE	Elg	1000	125	LAD	192	125	Tales.	1200	1000	1,000	1697	0	100	1,050	417	120	120	10000	1500	1700	170	1980	1700	1745			
sub-bolo	nt	ļ			1	127.14	120.47	125.80	130.30	130.00	130,88	30.14	131.06	第1次1	130.00	130.20	128.64	123,79	135.33	138.00	120.66						
embankme	int.					127.14	128,47	129.80	100.00	130,00	130,06	13024	13018	130,08	130000	129.92	10000	128.76	28.53	138.00	138.38						
AS-BUIL	т		Ī				129.24	129.24	130.26	表演	123.24	120.24	25.24	25,24	129.24	128.24	128.24	128.24	120.26	120.24							



Total Volume at Station 641+100.00

0.00

90.48

1846-67

10388.58

Cut Area

FILL AREA

FIII Vot

CUM FILL VOL





Owner
Ministry of Transportation
National Authority for Tunnels (NAT)

Senared Arthority for Assets , Seedge (David Yveropret)

Project Name ELECTRIC EXPRESS TRAIN (HIGH-SPCED RAIL) SECTION (HIGH-OLD) TO ARRAM (T) STATION 628-LLO LE - STATION 7254624 68

KEY PLAN



SECTION (FROM QUIS TO ABJUANT) ETATION 629+130:15 - STATION 715-624 88

*All dimensions are in meters

List of cross-sec Expression

-	Ensisting Ground Lavel
_	Proposed bub-fielded trust

vec consider





Contractor EL-ZAHABY



Drawing Name

cross-sec for HSR OCTOBRE - ASWAN section ! EL-ZAHABY COMPANY from km 637+952 to 643+863

Drawing scale

Drawing NO HSR - SEC 5 - cross-sec- (1

EXPRESS TRAIN SEC.(641+160.00) Total Valume at Station 641+160.00 101 101 101 Gut Area 0.00 89.85 FILL AREA Fill Vol. 1819.36 STREET PROM CUM FILL VOL 16042.88 RESOLUTE LEVE unb-ballast embaskment AS-BUILT

SEC.(641+200.00) Total Valume at Station 641+200.00 147 Cut Area 0.00 -----FILL AREA 92.52 Fill Vot 1824.02 CUM FILL VOL 19664.17 STOLING LEV nat-before embankment AS-BUILT

SECTION (FROM QUIS TO ARMANT) STATION 628-LLO.33 - STATION 715-624.63 1/2011 *All dimensions are in meters

owner

19mer

KEY PLAN

Ministry of Transportation tional Australity for Tunnels (WAT)

lowers hatherty for Foods , Bridges Carol Transport

Project Name
ELECTRIC ENTREE TRANS (HESH-SPEED NOL.)
SECTION (FROM QUS TO ARMANT)
SEATION 628-128-12 - STATION 715-EULIS

List of cross-sec Expression

weer comulta-

100 miles SRRLT Consultan

Contractor

EL-ZAHABY

Drawing Name

cross-sec for HSR OCTOBRE - ASWAN section EL-ZAHABY COMPANY from km 637+952 to 643+863

Drawing NO HSR - SEC 5 - cross-sec- (1)

EXPRESS TRAIN

							3	S	E(C.	(6	41	+	18	30	0	0	N.									
104	Γ										.TI					Ī	Ī								Total Valume at St	tation 641+180.00	
100	ı				9	2	á	H	E	H	111	Ė	B			1	Ġ	H	6		ķ				== Cut Area (1.00)		
100 104 105	Ė	E	F	E	ľ	F	Ī	Ē	Ī	E												-	3		FILL AREA	89.88	
9	200	000	200	20	3	500	00	00	8	3	3		0	0.1	0		- 20	R	20	37	- 00	00	000	- 00	Fill Vol	1797,28	
ALPEL HOW CA	1	1	100	1	Ť	12	F	ī	Ì	1	1		32.0	4.0	a 00	8	1	9	145	110	2	SW	d		CUM FILL VOL	17840.16	
COCUMO LENGUE	6007	125,45	126.37	126.30	726.40	126.37	178.35	125,35	1255.92	125.42	140,35	Ì	1405.45	126,25	425.20	125,24	200	125.10	126.74	3205.119.	445,05	120,08	120,07	Leady-UT			
sub-ballest						128.55	120.88	130,28	130,98	131.06	111.14	31.13	41.00	131.00	130.98	130.28	129,92	129.04	129547	108.38	100.74		Ì				
embankment		Ī			127.22	128.55	132.88	130,00	130,06	150.16	200.24	130.30	130.24	120.16	100.08	136,00	129.92	128,64		138.68			j				
AS-BUILT	Ī				1	128.32	120.32	129.32	20.32	120,32	28.32		129,32	120,027	129.32	28.32	128.32	k	128.32	20.00		Ī	Ī				

Total Volume at Station 641+220.00 Cut Area FILL AREA NORTH THEFT CUM FILL VOL sub-bollast emborémen AS-BUILT

		_
W 150	THE WATER WAS TAKEN	4
Penn street	ليان كريستان الم	÷.
HCD.	Blag Eme - sec. O	5
# (tab)	تشارق الاعتمال انساحية	-1



0.00

117.16

2096.84

21761-01

EXPRESS TRAIN

EXPRESS TRAIN SEC.(641+220.00)



Fill Vol.

EXPRESS TRAIN SEC.(641+240.00) Total Vokame at Station 641+240.00 Cut Area 0.00 FILL AREA 128-67 Fit Vol 2458.27 WORN THEFT CUM FILL VOL 24219.28 GROUND LEVEL sub-hallost embankment AS-BUILT

المستورة الأسمال انساحية بالقداء





OWNER Ministry of Transportation National Authority for Turnells (NAT)

DWHEL

Seniral Authorsy for Royce , BridgesSland Nanopert

Project Name FLECTION DEPRESS TRAIN DRICH SPEED BIR. I SECTION (FROM QUE TO ARMANT) STATION 628+130.13 - STATION 715+624-63

KEY PLAN



SECTION	(FROM OU	STO ARIAM	NT.1
STATION IS	9+110-15-	STATION TO	D+504.E

	ACCOUNTS BOOK TABLE AND TRANSPORT OF THE											
NV.	IMIC	Drawing berne										
CHE	9,0003	proteines.	Married SwigerSt									

*All dimensions are in meters

List of cross-sec Expression

	Entiting Ground Level	_
_	Everyoned Sub-Bulliant from	er.



6 ABI T Consultan





Contractor EL-ZAHABY



cross-sec for HSR OCTOBRE - ASWAN section 5 EL-ZAHABY COMPANY from km 637+952 to 643+863

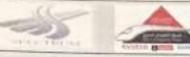
Drawing scale MSR - SEC 5 - cross-sec- (1)

Drawing NO









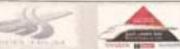
أعمال الشاء الجدر الترابي للقطار الكهربائي السريع (أكتوبر / أبوسميل). من محطة 110.13 + 629 + 715 عفول 86.5145 كم تنفيذ شركة / الذهبي بوسف التعلولات العمومية من محطة 67.578.67 التي 635.534 - 641 عطول 656.67 م

Wante	سرهنة	Tjub!	Cent.	345000	الفند
				إهال الاللة والتطهير	1
50,000	6.00	B,333	2,	بالدر السخح اصل تطهير النوقع من الإشجار والدرروطات والمطلقات في ستعلق ذات الطبيعة الزراعية الكايفة بمبق. حتى 30 سم و التخلص حتها بالمقالب العمومية وبلك لنساقة على 500 متر المهنا الأعمال الرفع المستمي للامل حدود المشروع طبقا للشروط والمواصطات وتعليمات المهندس المشرطار ايتر استنباب علاوه 0.30 جنيه كال 1 كل	1
5,429	61.00	89	3+	باسار الدكاف أحمل تأثير وازالة المنطحات العلهارة بالرصف الدالي في الإمكان التي يحدها المهدس المشرف وطل ماح التأثير خارج الدواع ومترسط مسافة الثال علي 10 كم وجل ما يترام لهو المن طبة لكرامية الشروطاو الدواصفات وتطيمات المهدس المشرف. وفي حالة زيادة مسافة على داج التأثير عن 10 كم من معور الطريق يتم حساب 1 جنبة الكيلومتر الأربادة أو القلص.	1.
				اعدل تعلى	2
1,778	23.00	π	3-	يشتر البكاب اصل ها بالتحديد المحال الميكانيك لصبح لواح التربة السحرية وتسوية السطح بالات السحرية وتسوية السطح بالات السوية والرش بالنباء الاصولية الرصول الى السبة الرطوبة المحال الميكانية والمحال الميكانية المحال الميكانية المحال الميكانية الإنهاء الرافية المحال المح	2-1
85	1,10	77	3-	عاكرة سنالة النائل (كر	
46	0.60	77	3,	علاوة زيادة السوائل	-
01,760	26.00	7,760	34	القبار المكافب احسال على باستخدام المجانب الميكانيكية في قارية المتمانيكة حدا الترية المستخرية إلىلسنطام الملاوزي) المورة السناح بالات السوية والرائل بالدياء الإصوارة الأوصول الى سنية الرحارية المطارية والسابة الهي بالهر است والمورد في القسير خلافة جافة (1955) من الكافة الموقة القسودي) ومعمل على المد تصيل وقال الإثراية الرائلة المسافة 500 متر معود الطريق ويم الفاهة علمة المعاليب القسيسية والقطاعات المرضية المورودية والرحومات القسيلية المعادة والمد يجمع منشكاتة طبقة الصول القسنامة ومواصفات الهيئة العامة الطرق والكباري وتعليمات المهندي مشرف. حارة ويقد السوال 0.7 حيا البرة المسام و 1.1 جنة الرائم ابتداء من 4/5/2023	2 2
8,536	1.10	7,760	3,	الأرة بسقة النان 1 كم	
5.432	0.70	7,760	3.	الرازيلة السولار	w)

- Fring







مقايسه معدلة





أعدل الشاء الحدر الترابي للطار الكهريائي الدريع (أكتوبر / أبوسمبل). من محطة 13 110 + 629 حتى محطة 624.63 + 715 بطول 86.5145 كم. تنفيذ شركة / الذهبي يوسف المعاولات العمومية من محطة 640+578.67 التي 235.34 - 641-235.34 بطول 656.67

2445	سو الله	Two .	42.04	3.4°0 (in	+
Prints.	100 300	440	Tage	أعال الثرية السلمة	- 6
	-		2,	باشدر مستخد نور بد وتركيب طبقه من النسيج المستامي هيونكستان مستورد الداخل لا على عن 10% ويتم اللغيا طبقاً الأصول المستامه والرسومات القصيفية المهتدية والتدريسوم متساتات طبقا لمواسطات الهيئة المائم الطرق والكباري وتطبيبات المهتدين السترف	1-
344	31.00	1.5	2,	تان وزير ٧ هال عن 200 هم/نر2	1-1
478	43.00	11	2	علت وزن لا وقل عن 300 مرابر2	
3,333	60.00	56	2,	شنارزن لا بال عن 400 هراء2	3-1
			2,	بالمثر مسطح توريد وتركيب طفه من السبح الصناعي جوهريد مستورد التداعل لا يكل عن 10% ويتر النفيد علنها الأصول المستاحة والرسومات القصيلية المهتمرة والبت بصبح منتمالات علنها المواصفات البهنة العامة الطرق والكاراي ومطلمات المهتمل المثروب	
489	44.00	11	2.	بلت قرا لند 20 كارتبوش في الإحاضين	1-2
3.885	47.00	83	0.	نات او دالد 30 كديوان في الإحاص	2-2
		Total Control		النصاب الفرسانية الرصف العرباني	13
5,444,105	433.00	12,573	22	بشتر السحاح المثل توريد وصب هوسته عليه مدك 15 مع لارخاج 10متر والتي تعديه الانتف والدول المتهية المشترين (فير جميشا) المكون من 10.0 من مواومت مشرح عـ 0.4 من والإصحاف طبقا تعليدت الاستشرين (فير جميشا) على الديكون شر والإصحاف طبقا تعليدت الاستشرين (فير جميشا) على الديكون شر بالمنتزين والديكون من الشواف والمنتزين والمنتزين والمنتزين والمنتزين والمنتزين والمنتزين والمنتزين والمنتزين المنتزين والمنتزين والمنتزين المنتزين المنزين المنتزين المنتزين المنتزين المنتزين المنتزين المنتزين المنتز	1
3,772,425	2.685.00	1,405	3+	بشتر المكامل اعدل توزيد وصب عرساته عاده كانها قديه سطيه و علويه الكانف و الدين الجلدية تكون من 0.0 بود المحاد من وجود منزل به المحاد و الدينة المحاد الإستان في المحاد منزل به يكون الدينة المحاد والوجود المحاد والمحاد والوجود المحاد والمحاد والمحاد والمحاد المحاد والمحاد المحاد والمحاد المحاد والمحاد المحاد والمحاد والمحاد المحاد المحاد المحاد المحاد والمحاد المحاد المحاد والمحادة والمحاد المحاد والمحاد المحاد والمحاد المحاد المحاد المحاد المحاد المحاد المحاد المحاد المحاد والمحاد المحاد المحا	2



مقايسه معالة

أعمال الشاء الجسر الترابي للقطال التهوياتي السريع (أكتوبر / أيوسمس) من محطة 11.011+ 629 حتى محطة 624 (625 + 715 يطول 86,5145 كم يوسف المعاولات العدومة من محطة 627 - 758 (62 ما 63 - 641)

100	سليد شوكة / الذهبي يوسف المفاولات العمومية عن معطة 578.67 (640-640) المادولات العمومية عن معطة 578.67 (640-640	Tag	Lus	نواللة	الإمدائي
1.0	Embantment aspilet	1000000			
	الحال المستق والوزيد والله ألوية مثالية المواصدة، وتشغيلها بالمنجاء الادب الدوية بعث 30 مرد عن 50 مر على جدوب (20 مر أو السل مسوية القرمة و وعداد الوزية عن 50 مرد على جدوب (20 مر) مر حدوب الرحمة والمشهود الشهود المسوية والتنظيم والإنقاض والميانة المسوية والمسوية والمسوية والمسوية والمسوية والمساوية والمسوية والمساوية والمسوية والمساوية المساوية والمساوية المساوية المس	Ďe.	113,000	60.00	6,780,000
4	Prepared Subgrada	100	TO SERVICE STATE OF THE PARTY O	1000	2020
1-4	بالمنز الساعب العمل توريد وقر الن طباة السياس (Vropared Subgrass) من الأحجاز السلمة الساعر ما يالج تقسير التحد القسار الد والمعابلة المواصطات واقسي حجر المهيات (100 مرو الا وي سية الدار من منظل 200 من 19.8 والدرج فوار بالإنجاز الفلك المفسلة بالمشروع لا على سنة تعدل كالهورية عن 19.8 والا فريد سنة الفاقة بجهاز أول الجورية المعارف عن (1.3 والا مرابة الحيالة بعن الرواية (5.2 مروية (5.2) من تعربه أوج المعمل عن 1.5 مروية المعارف عن 1.3 مرابة عن المعارف المعارفة على الا ورد حملة اطبقة بعد تمام المعارف عن 1.5 مرابة المعارفة المعارفة والمعارفة المعارفة والمعارفة المعارفة والمعارفة المعارفة المعارفة المعارفة المعارفة والمعارفة والمعارفة والمعارفة والمعارفة والمعارفة المعارفة والمعارفة المعارفة والمعارفة والمعارفة والمعارفة والمعارفة المعارفة والمعارفة وا	3a	B.000	130.00	1,040,000
	سلة على 100 كم	3-	8,000	104.00	832,000
	غارته نوريد الأسلس	3.	8,000	25.00	200,000
	عالوه زياده السوكار	3,	8,000	1.90	14,400
5	Subbelled_wind: wide				
1-5	يقش المناهب أصل ترزيد وهر تن طبقة أدنى من الأبعيل السلبة الشارجة بالح تقدير الاستراث والسفايقة الموصدات والفسي حجم المجهدات ما يس 1.5 مع الى 1.5 مع والا يزيد نصبة أصار من علمل 200 عن تلاكا والشرح الوارد بالانشراطات البشاء المفارع لا قل سجم المفارع بنا عن 1850 والا يون الانستان عن 150 إلى نصرة أو المستقل بالمنسائل المستقل المنسائل المستقل ا	3,	6,000	135.00	810,000
	سفة على 100 كم	3-	6,000	104.00	524,000
_	الرية توريد الأستي الرية توريد الأستي	3,	6,000	25.00	50,000
	عالرة ريقة شير ال	3.	6.000	1.80	0.000





