

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 15/04/2023
Reporting Date : 21/04/2023
Reporting No. : 22
Sample No. : 22

Dear Gentleman,

Attached here with the Soil Embankment delivered on 15/04/2023

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 /


Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 15/04/2023
Reporting Date : 21/04/2023
Reporting No. : 22
Sample No. : 22

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	97.1
25	83.8
19	73.2
12.50	63.2
9.50	56.1
4.75	43.8
2.36	37.1
2.00	34.1
1.18	33.3
0.600	31.8
0.425	29.2
0.300	20.0
0.150	14.4


مكتب معامل الإستشارات الهندسية
توقيع / 
رام الله تعالى
العنوان: 3 شارع الملك الأفضل - الزمالك - القاهرة
الهاتف: 27367231 - 27363093

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 15/04/2023
Reporting Date : 21/04/2023
Reporting No. : 22
Sample No. : 22

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	12.6

Signature /



Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 15/04/2023
Reporting Date : 21/04/2023
Reporting No. : 22
Sample No. : 22

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

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

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مكتب معامل الاستشارات الهندسية
د. محمد عبد الحليم
3 El Malek El Afdal Street - Zamalek - Cairo
Tel. & Fax : 27367231 - 27363093

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 15/04/2023
Reporting Date : 21/04/2023
Reporting No. : 22
- Sample No. : 22

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	34.1	Max 50 %	-----
0.425 mm (No. 40).	29.2	Max 30 %	Max 50 %
0.075 mm (No. 200).	12.6	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

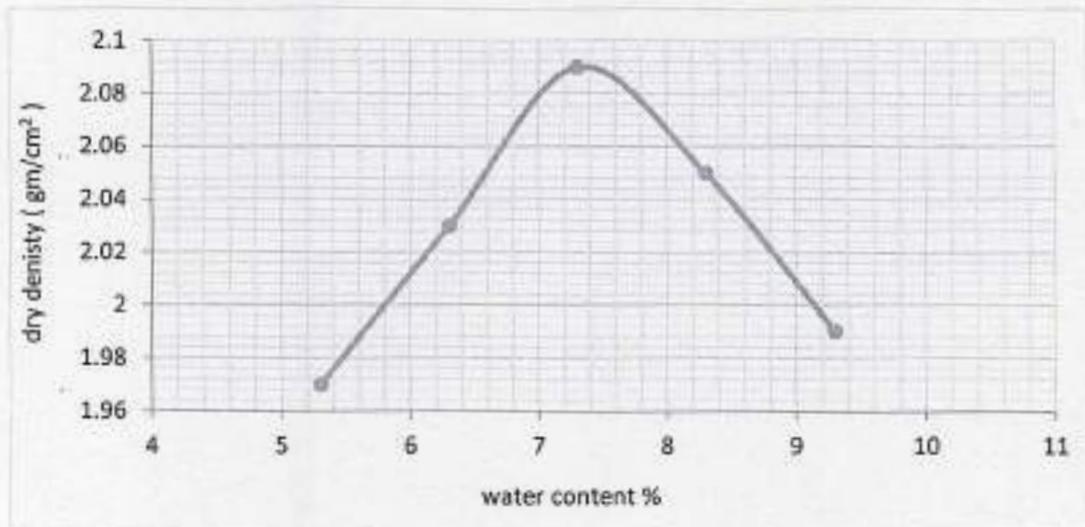
The test results are (Comply - Not Comply) with specifications limits

Signature /


مكتب معامل الاستشارات الهندسية
3 شارع الملك ابي الفضل - الزمالك - القاهرة
رقم تسجيل المهندسين: 2014 - 2015
البريد الإلكتروني: cel@cel-egypt.com

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
- Type of sample : Soil Embankment
Delivery Date : 15/04/2023
Reporting Date : 21/04/2023
Reporting No. : 22
Sample No. : 22

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



- Max dry density (gm/cm²) : 2.09
- Optimum moisture content % : 7.3

Signature /



Company Name : حسن أسعد طة (سيناء للمقاولات)
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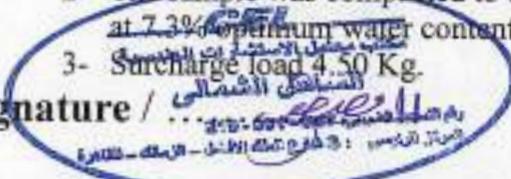
Test Results of California Bearing Ratio on Base Materials ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	2.18
1.27	0.050	2.38
1.91	0.075	2.64
2.54	0.100	2.89
3.18	0.125	3.04
3.81	0.150	3.20
4.45	0.175	3.40
5.08	0.200	3.60
5.71	0.225	3.75
6.35	0.250	3.91

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	41.9
	6.90	2.89	

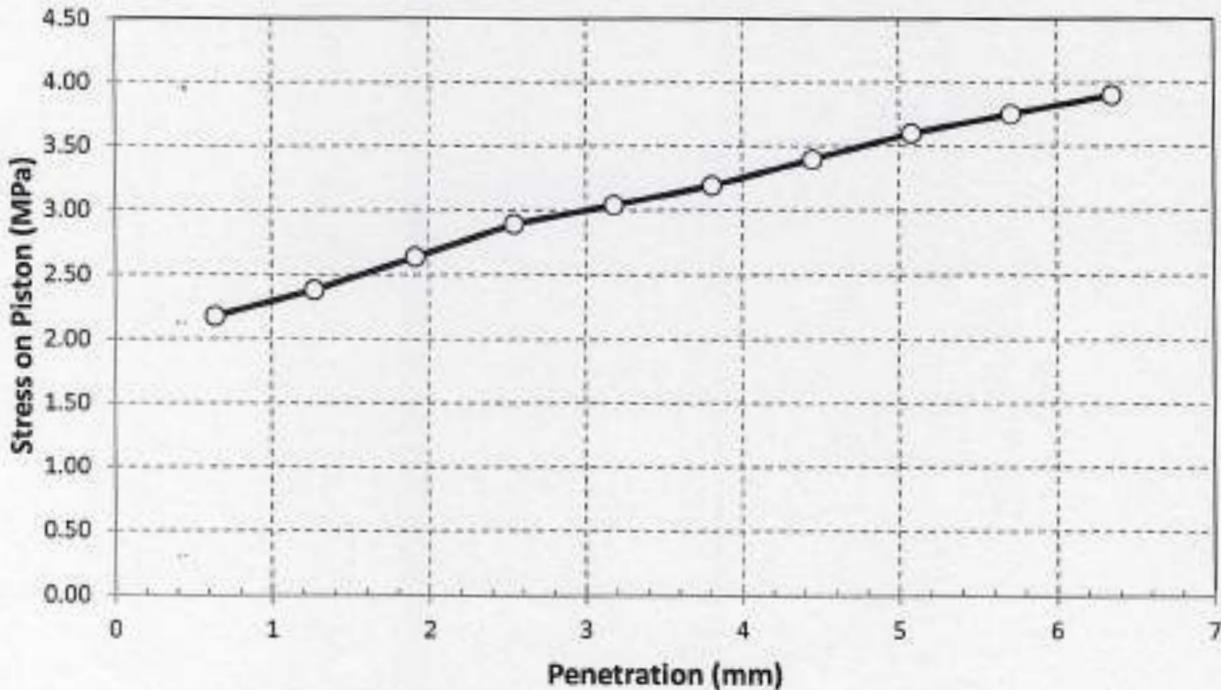
Notes :

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.09(gm/cm³) at 7.3% optimum water content.
- 3- Surcharge load 4.50 Kg.

Signature / 

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Type of sample : Soil Embankment
Delivery Date : 15/04/2023
Reporting Date : 21/04/2023
Reporting No. : 22
Sample No. : 22

Load Penetration Curve of CBR Test ASTM D-1883



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Signature: *[Handwritten Signature]*
رقم تسجيل الشركة: 007 - 001 - 210
مركز القاهرة
3 شارع الملك الأفضل - الزمالك - القاهرة

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 01/05/2023
Reporting Date : 06/05/2023
Reporting No. : 24
Sample No. : 24

Dear Gentleman,

Attached here with the Soil Embankment delivered on 01/05/2023

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


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210-500-537 - 537-500-210
3 شارع الملك الأفضل - الزمالك - القاهرة

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 01/05/2023
Reporting Date : 06/05/2023
Reporting No. : 24
Sample No. : 24

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	96.4
25	82.4
19	73.7
12.50	64.8
9.50	57.4
4.75	48.6
2.36	43.0
2.00	38.1
1.18	35.5
0.600	33.2
0.425	31.1
0.300	26.0
0.150	14.4

Signature /


مكتب معامل الاستشارات الهندسية
أحمد عبد الله الشيباني
رقم تسجيل المهندس: 1227 - 1994
الشارع رقم 3 - الملك الأفضل - القاهرة

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 01/05/2023
Reporting Date : 06/05/2023
Reporting No. : 24
Sample No. : 24

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	11.9

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Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
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Delivery Date : 01/05/2023
Reporting Date : 06/05/2023
Reporting No. : 24
Sample No. : 24

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

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

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مكتب معمل الاستشارات الهندسية
المصالح الشمالية
بمصر الجديدة
شارع الملك الأفصل - القاهرة

Company Name : حسن أسعد طة (سيناء للمقاولات)
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Type of sample : Soil Embankment
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Reporting Date : 06/05/2023
Reporting No. : 24
Sample No. : 24

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	38.1	Max 50 %	-----
0.425 mm (No. 40).	31.1	Max 30 %	Max 50 %
0.075 mm (No. 200).	11.9	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

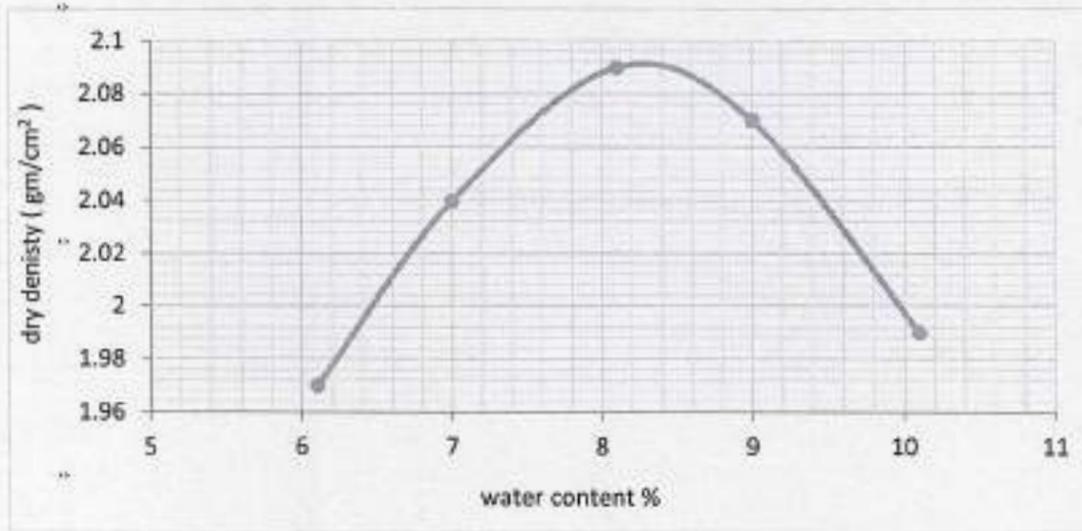
The test results are (Comply - Not Comply) with specifications limits

Signature /


مكتب معامل الإستشارات الهندسية
الساحل الشمالي
رقم الترخيص: 27367231 - 27363093
العنوان: 3 شارع الملك الأفضل - القاهرة

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 01/05/2023
Reporting Date : 06/05/2023
Reporting No. : 24
Sample No. : 24

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



- Max dry density (gm/cm³) : 2.09
- Optimum moisture content % : 8.1

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المعامل الشمالي
27367231 - 27363093
www.cel-egypt.com

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Type of sample : Soil Embankment
Delivery Date : 01/05/2023
Reporting Date : 06/05/2023
Reporting No. : 24
Sample No. : 24

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

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	2.38
1.27	0.050	2.54
1.91	0.075	2.74
2.54	0.100	2.99
3.18	0.125	3.27
3.81	0.150	3.49
4.45	0.175	3.63
5.08	0.200	3.78
5.71	0.225	3.91
6.35	0.250	4.01

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	43.4
	6.90	2.99	

Notes :

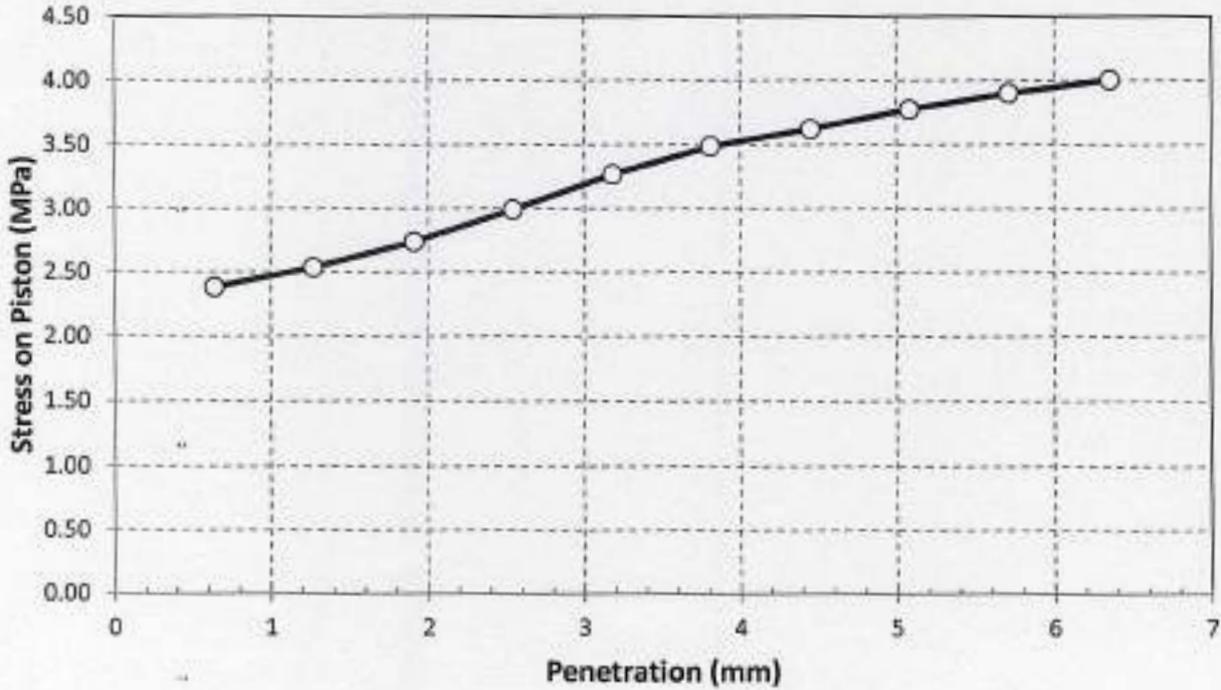
- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.09 (gm /cm³) at 8.1% optimum water content.
- 3- Surcharge load 4.50 Kg

Signature

Handwritten signature and stamp of the laboratory, including contact information and accreditation details.

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 01/05/2023
Reporting Date : 06/05/2023
Reporting No. : 24
Sample No. : 24

Load Penetration Curve of CBR Test ASTM D-1883



Signature

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مكتب معامل الاستشارات الهندسية
الشيخ محمد الشيباني
رقم تسجيل المهندسين: 827 - 884 - 898
البريد الإلكتروني: cel@cel-egypt.com

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 20/05/2023
Reporting Date : 26/05/2023
Reporting No. : 26
Sample No. : 26

Dear Gentleman,

Attached here with the Soil Embankment delivered on 20/05/2023

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 /



Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 20/05/2023
Reporting Date : 26/05/2023
Reporting No. : 26
Sample No. : 26

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	96.1
25	85.1
19	76.8
12.50	69.6
9.50	59.5
4.75	52.5
2.36	50.0
2.00	44.1
1.18	40.2
0.600	34.9
0.425	28.3
0.300	23.0
0.150	15.0

Signature /


المعامل الهندسي
رقم التسجيل المبرمج 887 - 891 - 899
العنوان الرئيسي : 3 شارع الملك فيصل - 19 - الملك - القاهرة

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 20/05/2023
Reporting Date : 26/05/2023
Reporting No. : 26
Sample No. : 26

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	12.6

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مكتب معامل الاستشارات الهندسية
الساحل الشمالي
رقم الترخيص 007 - 009 - 319
البريد الإلكتروني : 3 شارع الملك الأفضل - 3 زمالك - القاهرة

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 20/05/2023
Reporting Date : 26/05/2023
Reporting No. : 26
Sample No. : 26

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

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

Signature

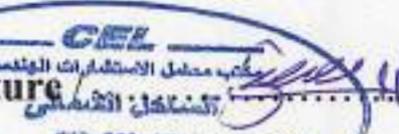


Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 20/05/2023
Reporting Date : 26/05/2023
Reporting No. : 26
Sample No. : 26

Soil Classification According to Project Specs (Embankment)

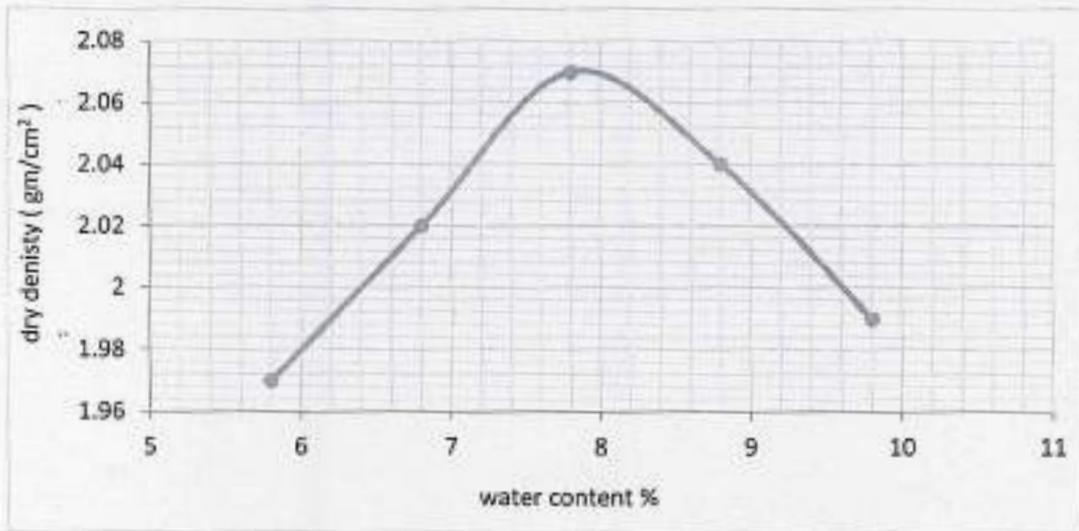
TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	44.1	Max 50 %	-----
0.425 mm (No. 40).	28.3	Max 30 %	Max 50 %
0.075 mm (No. 200).	12.6	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

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


Signature
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الاستشاري
رقم التسجيل الهندسي: 027 - 091 - 010
العنوان: 3 شارع الملك الأفضل - القاهرة - 11511

Company Name : حسن أسعد طة (سيناء للمقاولات)
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Type of sample : Soil Embankment
Delivery Date : 20/05/2023
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Reporting No. : 26
Sample No. : 26

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



- Max dry density (gm/cm²) : 2.07
- Optimum moisture content % : 7.8

Signature


مكتب معامل الإستشارات الهندسية
السناء للمقاولات
رقم التسجيل الموحّد: 427 - 001 - 212
العنوان الرئيسي: 3 شارع الملك الأفدال - 19 - 10000 - القاهرة

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 20/05/2023
Reporting Date : 26/05/2023
Reporting No. : 26
Sample No. : 26

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

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	2.28
1.27	0.050	2.54
1.91	0.075	2.79
2.54	0.100	3.04
3.18	0.125	3.30
3.81	0.150	3.55
4.45	0.175	3.80
5.08	0.200	4.06
5.71	0.225	4.31
6.35	0.250	4.56

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	44.1
	6.90	3.04	

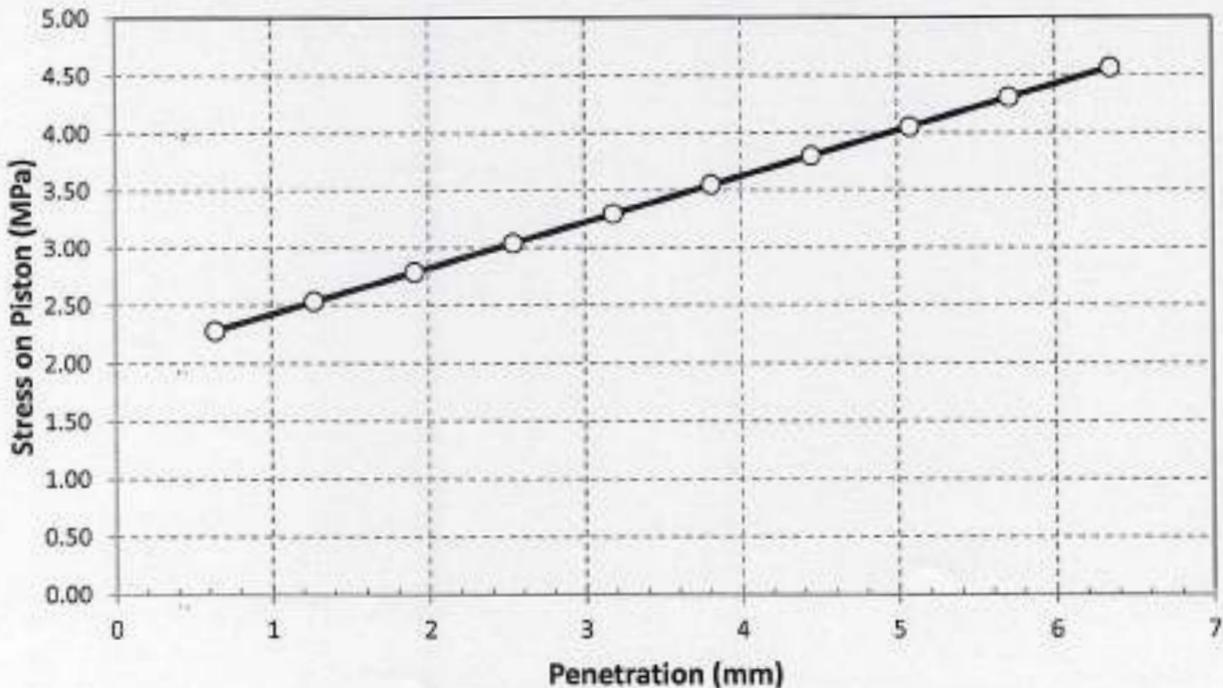
Notes :

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.07 (gm /cm³) at 7.8% optimum water content.
- 3- Surcharge load 4.50 Kg.

Signature / 

Company Name : حسن أسعد طة (سيناء للمقاولات)
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Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 20/05/2023
Reporting Date : 26/05/2023
Reporting No. : 26
Sample No. : 26

Load Penetration Curve of CBR Test ASTM D-1883



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الملك فيصل الثاني
رقم الهاتف: 27367231 - 27363093
البريد الإلكتروني: cel@cel-egypt.com

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 19/06/2023
Reporting Date : 25/06/2023
Reporting No. : 27
Sample No. : 27

Dear Gentleman,

Attached here with the Soil Embankment delivered on 19/06/2023

Materials test

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

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

Signature / 

Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 19/06/2023
Reporting Date : 25/06/2023
Reporting No. : 27
Sample No. : 27

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

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ M (No.200)	12.7

Signature /



Company Name : حسن أسعد طة (سيناء للمقاولات)
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (472+100) : (473+100)
Type of sample : Soil Embankment
Delivery Date : 19/06/2023
Reporting Date : 25/06/2023
Reporting No. : 27
Sample No. : 27

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

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

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مكتب معامل الاستشارات الهندسية
البياحل الشمالي
رقم التسجيل المصري 004 - 004 - 004
المرکز القوي : 3 شارع الملك الأفندي - الزمالة - القاهرة

Company Name : حسن أسعد طة (سيناء للمقاولات)
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Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
		(A-1-a)	(A-1-b)
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	41.3	Max 50 %	-----
0.425 mm (No. 40).	28.2	Max 30 %	Max 50 %
0.075 mm (No. 200).	12.7	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

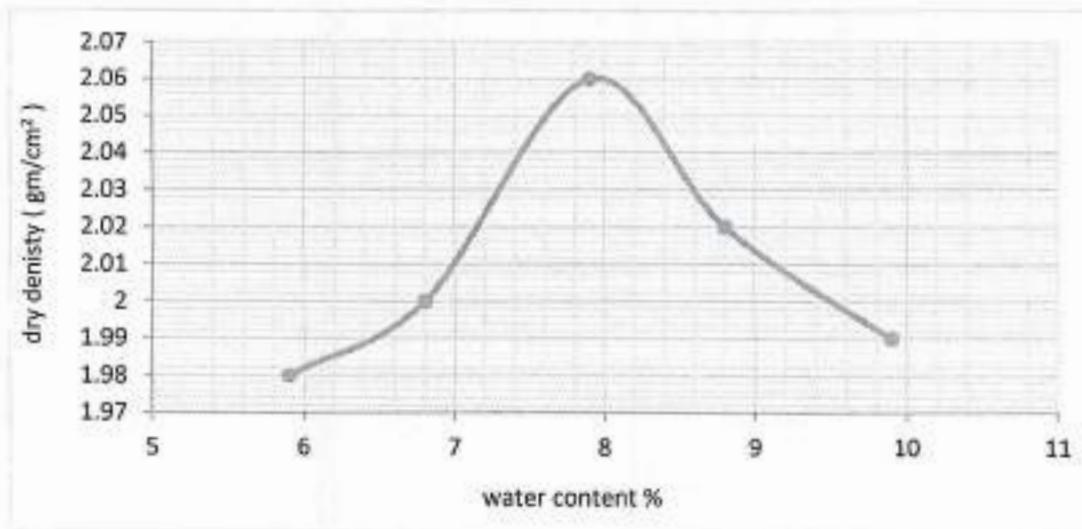
The test results are (Comply - Not Comply) with specifications limits

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الساهل الشمالي
رقم تسجيل المهندسين: 257 - 204 - 219
مركز القويس - القاهرة - مصر

Company Name : حسن أسعد طة (سيناء للمقاولات)
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Moisture – Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 2.06
- Optimum moisture content % : 7.9

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مكتب معامل الإستشارات الهندسية
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