

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد قنديل	 SYSTRA SHAKER	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARS MATROUH From Station 504+000 To Station 568+177	 الهيئة العامة لطرق و السكك الحديدية (EG.RAIL) الهيئة القومية للإنتاج NATIONAL AUTHORITY FOR PRODUCTION
--	--	--	---

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	18/1/2023	code	ZONE	506+000	507+000
			Material	K.P 506	
TESTING COMPANY	الفيروز	FZ-4			

1-Visual inspection test

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT [g]		18642.00		gm	table classify	
sieve size	2	1 1/2	1	3/4	1/2	3/8	# 4	PASS	soil classify	
(g)Mass retained	151.0	1670.0	3092.0	1307.0	1499.0	1278.0	2356.0		A-1-a	
(g)Cumulative Retained	151.0	1821.0	4913.0	6220.0	7719.0	8997.0	11353.0		PRO	2.158
Cumulative Retained %	0.8	9.8	26.4	33.4	41.4	48.3	60.9		WC	6.2%
Cumulative Passing %	99.2	90.2	73.6	66.6	58.6	51.7	39.1		CBR	61%

B-soft material gradation			WT.OF sample		500.00		gm
sieve size	10	40	200				
(g)Cumulative Retained	25.61	262.98	342.00				
Cumulative Retained %	5.12	52.60	68.40				
Cumulative Passing %	94.88	47.40	31.60				

C-General gradient										
(in)sieve size	5	4.0	3	1 1/2	3/4	3/8	# 4	# 10	# 40	# 200
(mm)sieve size	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	99.2	90.2	73.6	66.6	58.6	51.7	39.1	37.1	18.5	12.4

ATTERBERG LIMITS	(. L.L)LIQUID LIMIT	(.P.L)PLASTIC LIMIT	(.P.I)PLASTIC INDEX
	N.P	N.P	N.P

Contractor

Operated by

Consultant

Ramadan Taky

Gomaa Bader Lab

Mostafa Abu Ali

جمعة بدر نوح للمقاولات المعمومية
 وإنشاء ورصف الطرق والخدمات البترولية
 س.ب. ٥٥٣١٠
 ب.ب. ٥٢٣ - ٠٢٨ - ٩٧٠١

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي إ.د. خالد فتحي	 الخط الكهربائي السريع Electric Express Train CVSTRA SHAKER	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH From Station 506+000 To Station 568+177	الهيئة العامة للطرق والكباري والسكك الحديدية (GARBLT)  الهيئة القومية للإنفاق NATIONAL AUTHORITY FOR TUNNELS (NAT)
---	---	---	---

PROCTOR TEST

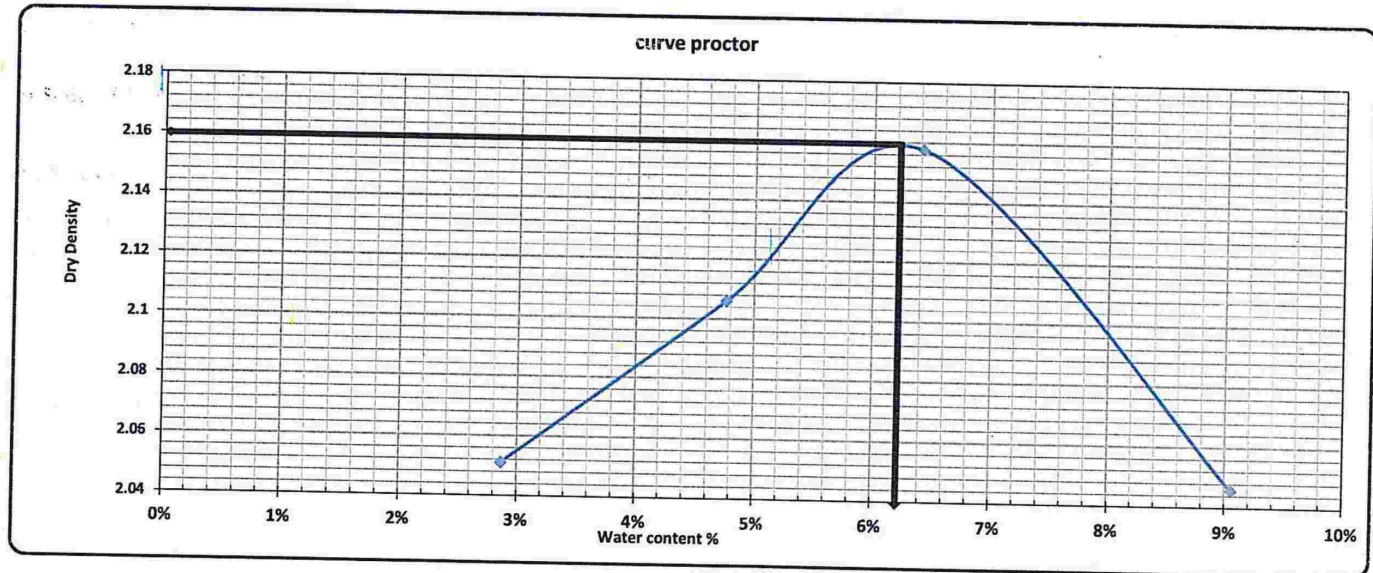
TESTING DATE:	18/1/2023	code	Station	506+000	507+000
			Material	K.P 506	
NAME COMPANY	الفيروز	FZ-4			

Weight of empty mold :	6428.0
Mold Volume:	2104.9

MAX Dry Density	2.158
Water content %	6.20

trial no :	1	2	3	4		
Wt. Of Mold+ wet soil	10869.0	11372.0	11261.0	11124		
WT. WET SOIL	4441.0	4644.0	4833.0	4696.0		
Wt. Density	2.110	2.206	2.296	2.231		

Tare No.	45	45	9	9	12	12	15	15				
Tare wt.	24.67	24.67	26.34	26.34	27.09	27.09	25.25	25.25				
Wt. Of wet soil & tare	137.0	137.0	136.3	136.3	143.4	143.4	136.9	136.9				
Wt. Of dry soil & tare	133.85	133.85	131.25	131.25	136.35	136.35	127.58	127.58				
Wt. Of water	3.1	3.1	5.0	5.0	7.0	7.0	9.3	9.3				
Wt. Of dry soil	109.2	109.2	104.9	104.9	109.3	109.3	102.3	102.3				
Water content %	2.9%	2.9%	4.8%	4.8%	6.4%	6.4%	9.1%	9.1%				
AV. Water content %	2.9%		4.8%		6.4%		9.1%					
Dry Density	2.051		2.106		2.158		2.046					



Contractor

Ramadan Taky
 جمعية بدر نوح للتقاولات العمومية
 وإنشاء وصرف الطرق والخدمات البترولية
 س.ت. ٥٥٣١
 ب.ض. ٩٧٠ - ٢٨ - ٥٢٢

Consultant

Mostafa Abo Ali

Electric Express Train - HSR

California Bearing Ratio TEST

Testing Date :	19/1/2023	Code	FROM STA :	506+000	TO STA :	507+000
Name Company :	الفيروز	FZ-4	: Material	K.P 506		

Test Results

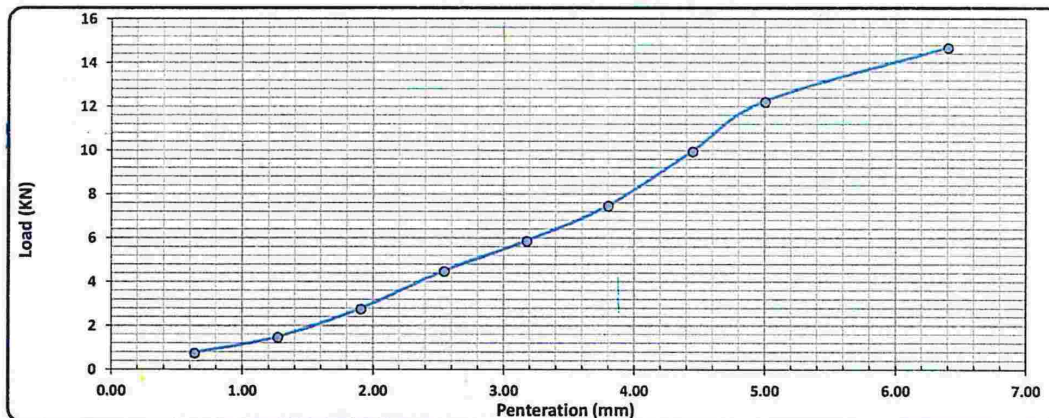
Compaction % for Mold	
Mold No.	2
Mold Vol. (cm ³)	2177.5
Mold WT. (gm)	16444
Mold WT. + Wet WT. (gm)	21372
Wet WT. (gm)	4928
Wet Density (g/cm ³)	2.263
Dry Density (g/cm ³)	2.141
Proctor Density (g/cm ³)	2.158
Compaction %	99

Moisture Ratio After Compacted Mold	
Tare No.	4
Tare WT. (gm)	26.31
Tare WT. +Wet WT. (gm)	146.28
Tare WT. +Dry WT. (gm)	139.8
Water WT. (gm)	6.5
Dry WT. (gm)	113.5
Moisture Content %	5.7

Swelling	
Mold No.	
Date	
Initial Height (mm)	0.00
Final Height (mm)	0.00
Difference	0.0
Sample Height (mm)	181.00
Swelling Ratio %	0.0%

Loading Reading :

(mm)Penetration	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
(mm)Load Reading	76	149	281	456	597	761	1014	1246	1497
(KN)Load	0.7	1.5	2.8	4.5	5.9	7.5	9.9	12.2	14.7



Calculations :-

Penetration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	% عند نسبة 100
2.50	4.47	13.4	33.5%	99	100	33.7%
5.00	12.21	20.0	61.0%			61.5%

Lab. Specialist

Name : *Ramez Tawel*

Sign :

Lab. Engineer

Name :

Sign :

Consultant Engineer

Name : *Mostafa Abo Ali*

Sign :

جسمة بدرنوح للمقاولات المعمومية
وانشاء ورصف الطرق والخدمات البترولية
س . ت : ٥٥٣١
ب . ض : ٩٧٠ - ٠٢٨ - ٥٢٣

MATERIAL INSPECTION REQUEST



Contractor Company	AL-FAYROUZ COMPANY			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MIR	C1 K.P 506	C2 EW	C3 CS	DD 18	MM 1	YY 23	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
Location to be Used	FROM	TO	LEVEL		
	506+780	506+860	(-2)		
	506+000	506+200	(-1.75)		
	506+200	506+300	(-1.75)		
MAR Approval No				Date	
Supplier Name					
Test Requirement	Specification			Clause	
Reference Photos	Yes attached / No			Other	
Item	Description	Unit	Quantity	Arrival Date	Note
1	SEIVE ANALYSIS	M ³	5000	18/1/2023	
2	ATTERBERG	M ³	5000	18/1/2023	
3	PROCTOR	M ³	5000	18/1/2023	
4	CBR	M ³	5000	19/1/2023	
Comments by:			Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed</i>		
QA/QC *	<i>Mostafa Ali</i>	<i>Mostafa Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ		Designer Company								
Issued by Contractor	Name	Sign	Date	Time							
	ENG/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MAR	C1 KP. 506	C2 EW	C3 CS	DD 19	MM 1	YY 23	HH	MM

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

Description of Materials	PREPARED SUBGRADE			
Location to be Used	FROM	TO	LEVEL	
	506+780	506+860	(-2)	
	506+000	506+200	(-1.75)	
	506+200	506+300	(-1.75)	
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P.L	
3	ASTM D 1557	PROCTOR	2.158	
4	ASTM D 18832	CBR	61%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed</i>		
QA/QC *	<i>Mostafa Abo Ali</i>	<i>Mostafa Abo Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

23

CN

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد قنديل	 SVSTRA SHAKER	Electric Express Train - HSR		 الهيئة القومية للإنفاق الطرق والمواصلات (م.ت.م.)
		From El Ain El Sokhna City To El Alamein - MATROUH		
		Section - 7 From FOKA To MARS MATROUH		
From Station 504+000 To Station 568+177		Opreating lap		Al Tewkol Central Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	19-01-2023	code	ZONE	506+000	507+000
LOCATION	K.P (506)	FZ (1)	Material		
NAME COMPANY	الفيروز		layer thickness		

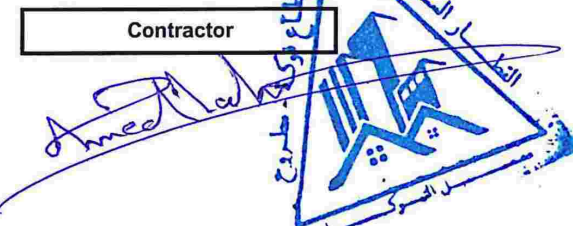
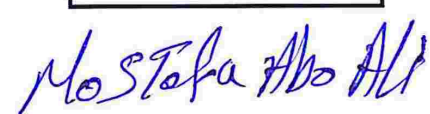
- 1-visual inspection test
- 2-Gradient test

<u>A-gradation of bulk materials</u>				SAMPLE WEIGHT [g]		33625.00		gm		table classify
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS		soil classify
Mass retained (g)	3266.0	2865.0	2855.0	2655.0	2413.0	2815.0	2566.0			A-1-a
Cumulative Retained (g)	3266.0	6131.0	8986.0	11641.0	14054.0	16869.0	19435.0			2.17
Cumulative Retained %	9.7	18.2	26.7	34.6	41.8	50.2	57.8		WC	7.20
Cumulative Passing %	90.3	81.8	73.3	65.4	58.2	49.8	42.2		CBR	55.80

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	55.00	215.00	390.00					
Cumulative Retained %	11.00	43.00	78.00					
Cumulative Passing %	89.00	57.00	22.00					

C-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	90.3	81.8	73.3	65.4	58.2	49.8	42.2	37.6	24.1	9.3

ATTERBERG LIMITS	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)
	N.L	N.P	N.P

Contractor	Consultant
	

	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSALA MATROUH From Station 504+000 To Station 568+177		

PROCTOR TEST

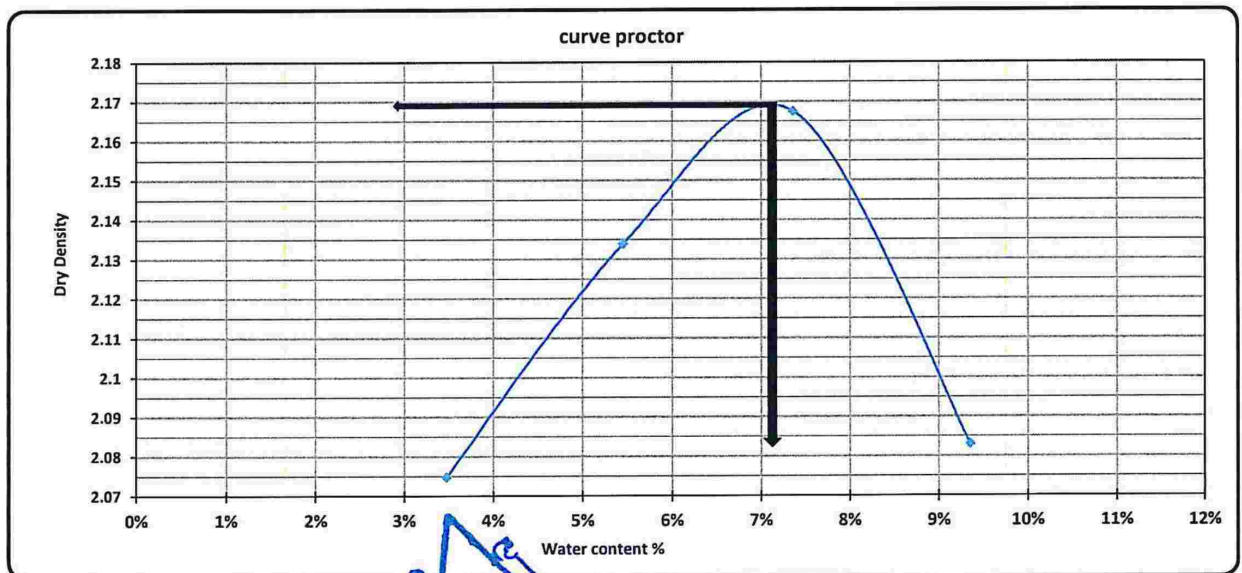
TESTING DATE:	19-01-2023	code	Station	506+000	507+000
LOCATION	K.P (506)	FZ (1)	Material		
NAME COMPANY	الفيروز		layer thickness		

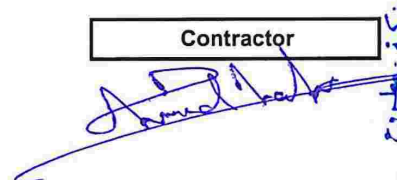
Weight of empty mold :	5620.0
Mold Volume:	2030.0

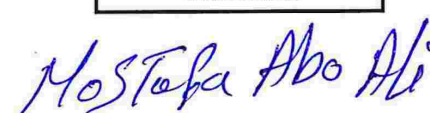
MAX Dry Density	2.168
Water content %	7.2

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	9978.0	10188.0	10344.0	10244	
WT. WET SOIL	4358.0	4568.0	4724.0	4624.0	
Wt. Density	2.147	2.250	2.327	2.278	

Tare No.	2	7	13	11	16	18	20	23		
Tare wt.	52.81	53.52	53.21	55.33	56.51	55.38	55.02	54.4		
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0		
Wt. Of dry soil & tare	146.8	146.7	144.9	145.2	143.6	143.5	142.0	141.7		
Wt. Of water	3.2	3.3	5.1	4.8	6.4	6.5	8.0	8.3		
Wt. Of dry soil	94.0	93.2	91.7	89.9	87.1	88.1	87.0	87.3		
Water content %	3.4%	3.5%	5.6%	5.3%	7.3%	7.4%	9.2%	9.5%		
AV. Water content %	3.5%		5.5%		7.4%		9.4%			
Dry Density	2.075		2.134		2.168		2.083			



Contractor



Consultant


California Bearing Ratio TEST

Testing Date :	22-01-2023	Code	FROM STA :	506+000	507+000
Location :	K.P (506)	FZ (1)	: Material		
Company Name	الفيروز		: Layer Thickness		

- : Test Results

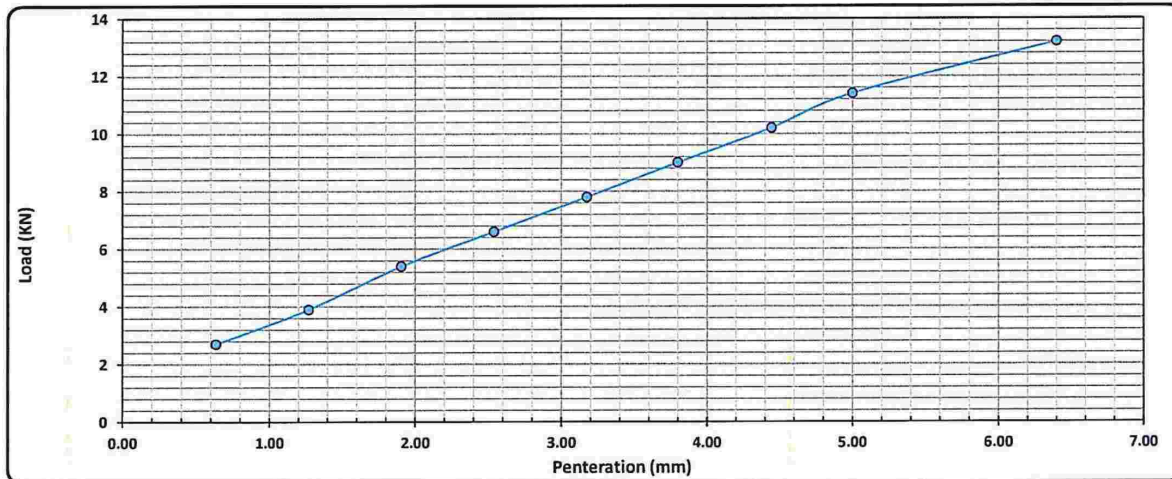
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm ³)	2030
Mold WT. (gm)	5310
Mold WT. + Wet WT. (gm)	10029
Wet WT. (gm)	4719
Wet Density (g/cm ³)	2.325
Dry Density (g/cm ³)	2.169
Proctor Density (g/cm ³)	2.170
Compaction %	100.0

Mositure Ratio After Compacted Mold	
Tare No.	2
Tare WT. (gm)	52.81
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	143.5
Water WT. (gm)	6.5
Dry WT. (gm)	90.7
Moisture Content %	7.2

Swelling	
Mold No.	1
Date	22-01-2023
Intial Height (mm)	3.50
Final Height (mm)	3.50
Difference	0
Sample Height (mm)	12.00
Swelling Ratio %	0%

Loading Reading :

Penteration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (mm)	0.09	0.13	0.18	0.22	0.26	0.30	0.34	0.38	0.44
Load (KN)	2.7	3.9	5.4	6.6	7.8	9.0	10.2	11.4	13.2



Calculations :-

Penteration (mm)	Load (Kn)	Standard Load (Ib)	CBR (%)	Mold - Compaction (%)	Compaction (%)	CBR % عند نسبة 98
2.50	6.60	13.4	49.4%	98	98	48.5%
5.00	11.40	20.0	56.9%			55.8%

Lab. Specialist

Name :

Sign :

Lab. Engineer

Name :

Sign :

Consultant Engineer

Name :

Sign :

100%

Mustafa Abo Ali

MATERIAL INSPECTION REQUEST



Contractor Company	AL-FAYROUZ COMPANY		Designer Company								
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MIR	C1 K.P 506	C2 EW	C3 CS	DD 19	MM 1	YY 23	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
Location to be Used	FROM	TO	LEVEL		
	506+300	506+400	(-1.75)		
	506+400	506+600	(-1.75)		
	506+600	506+700	(-1.75)		
MAR Approval No				Date	
Supplier Name					
Test Requirement	Specification			Clause	
Reference Photos	Yes attached / No	Other			
Item	Description	Unit	Quantity	Arrival Date	Note
1	SEIVE ANALYSIS	M ³	5000	19/1/2023	
2	ATTERBERG	M ³	5000	19/1/2023	
3	PROCTOR	M ³	5000	19/1/2023	
4	CBR	M ³	5000	22/1/2023	
Comments by:		Comments by:			

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed</i>		
QA/QC *	<i>Mostafa Abo Ali</i>	<i>Mostafa Abo Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	ENG/ MOHAMED TAHA	Mohamed Taha									
Received by ER			MAR	C1 KP. 506	C2 EW	C3 CS	DD 22	MM 1	YY 23	HH	MM

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

Description of Materials	PREPARED SUBGRADE			
Location to be Used	FROM	TO	LEVEL	
	506+300	506+400	(-1.75)	
	506+400	506+600	(-1.75)	
506+600	506+700	(-1.75)		
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P.L	
3	ASTM D 1557	PROCTOR	2.17	
4	ASTM D 18832	CBR	55.8%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mohammed Mostafa	Mohammed		
QA/QC *	Mostafa Abo Ali	Mostafa Abo Ali		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only



ENGINEERING CONSULTING OFFICE
المكتب الاستشاري الهندسي
أ.د. خالد فنديل



القطار الكهربائي السريع
Electric Express Train
SVSTRA SHAKER

Electric Express Train - HSR
From El Ain El Sokhna City To El Alamein - MATROUH
Section - 7 From FOKA To MARSА MATROUH
From Station 504+000 To Station 568+177



الهيئة القومية للإنفاق
الهيئة العامة للغمر والنقل
(G.A.R.A.T.)
MINISTRY OF TRANSPORT AND ECONOMIC AFFAIRS
مجلس الوزراء

Operating lap

Al Tewkol Central Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	24-01-2023	code	ZONE	506+000	507+000
LOCATION	K.P (506)	FZ (2)	Material		
NAME COMPANY	الفيروز		layer thickness		

visual inspection test

Gradient test

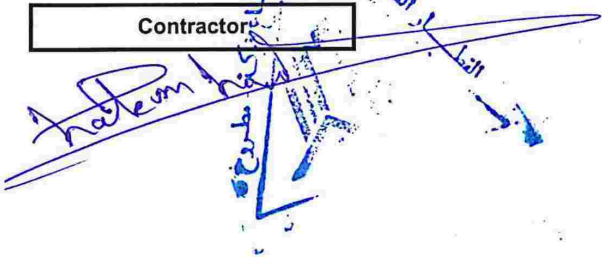
gradation of bulk materials				SAMPLE WEIGHT [g]		23290.00		gm	table classify
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS	soil classify
Mass retained (g)	2849.0	1635.0	1452.0	1610.0	1744.0	1526.0	1654.0		A-1-a
Cumulative Retained (g)	2849.0	4484.0	5936.0	7546.0	9290.0	10816.0	12470.0	PRO	2.17
Cumulative Retained %	12.2	19.3	25.5	32.4	39.9	46.4	53.5	WC	6.3
Cumulative Passing %	87.8	80.7	74.5	67.6	60.1	53.6	46.5	CBR	60.2

soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	75.00	210.00	370.00					
Cumulative Retained %	15.00	42.00	74.00					
Cumulative Passing %	85.00	58.00	26.00					

General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	87.8	80.7	74.5	67.6	60.1	53.6	46.5	39.5	26.9	12.1

ATTERBERG LIMTS	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)
	N.L	N.P	N.P

Contractor



Consultant



 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي إد. خالد فنيديل	 محطة كهربائية سريعة Electric Express Train SYSTRA SHAKER	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH From Station 504+000 To Station 568+177		 المشرفة لشرك و الكبارى و الطرق (GARELT) الهيئة القومية للإنتاج والتجارة م.م م.م

PROCTOR TEST

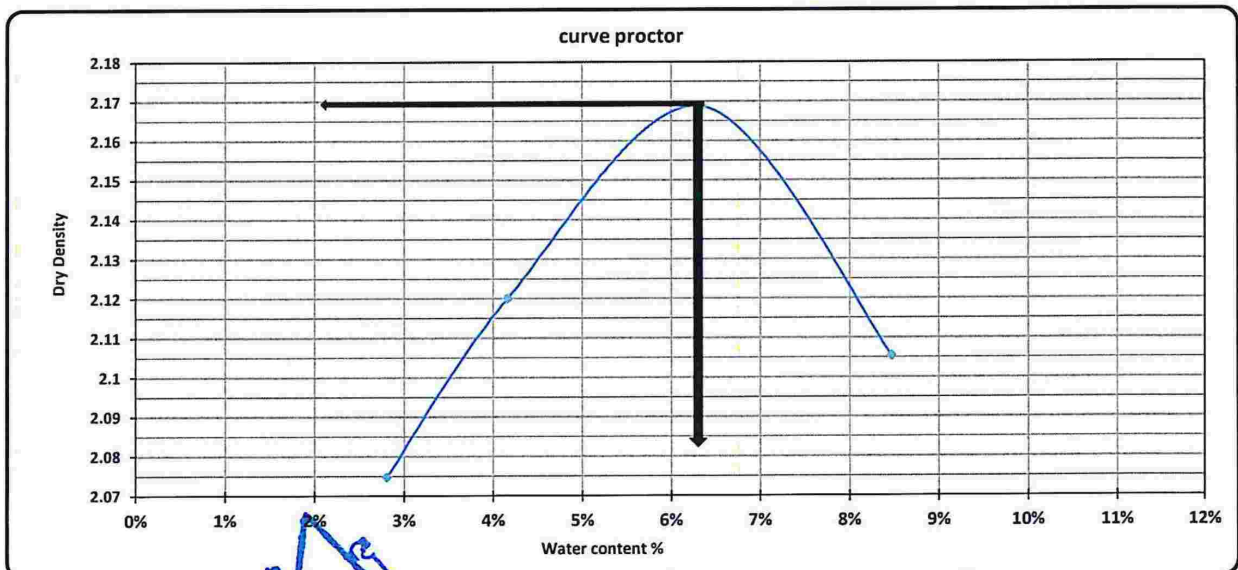
TESTING DATE:	24-01-2023	code	Station	506+000	507+000
LOCATION	K.P (506)	FZ (2)	Material		
NAME COMPANY	الفيروز		layer thickness		

Weight of empty mold :	5620.0
Mold Volume:	2030.0

MAX Dry Density	2.168
Water content %	6.3

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	9950.0	10103.0	10302.0	10256	
WT. WET SOIL	4330.0	4483.0	4682.0	4636.0	
Wt. Density	2.133	2.208	2.306	2.284	

Tare No.	3	6	8	11	14	18	22	23		
Tare wt.	55.72	53.97	57.06	55.33	53.66	55.38	54.76	54.4		
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0		
Wt. Of dry soil & tare	147.5	147.3	146.2	146.3	144.2	144.4	142.5	142.6		
Wt. Of water	2.5	2.7	3.8	3.7	5.8	5.6	7.5	7.4		
Wt. Of dry soil	91.8	93.3	89.1	91.0	90.5	89.0	87.7	88.2		
Water content %	2.7%	2.9%	4.3%	4.1%	6.4%	6.3%	8.5%	8.4%		
AV. Water content %	2.8%		4.2%		6.3%		8.5%			
Dry Density	2.075		2.120		2.169		2.105			



Contractor

Handwritten signature and stamp of the Contractor.

Consultant

Handwritten signature of the Consultant: Mostafa Abo Ali.

California Bearing Ratio TEST

Testing Date :	28-01-2023	Code	FROM STA :	506+000	507+000
Location :	K.P (506)	FZ (2)	: Material		
Company Name	الفيروز		: Layer Thickness		

- : Test Results

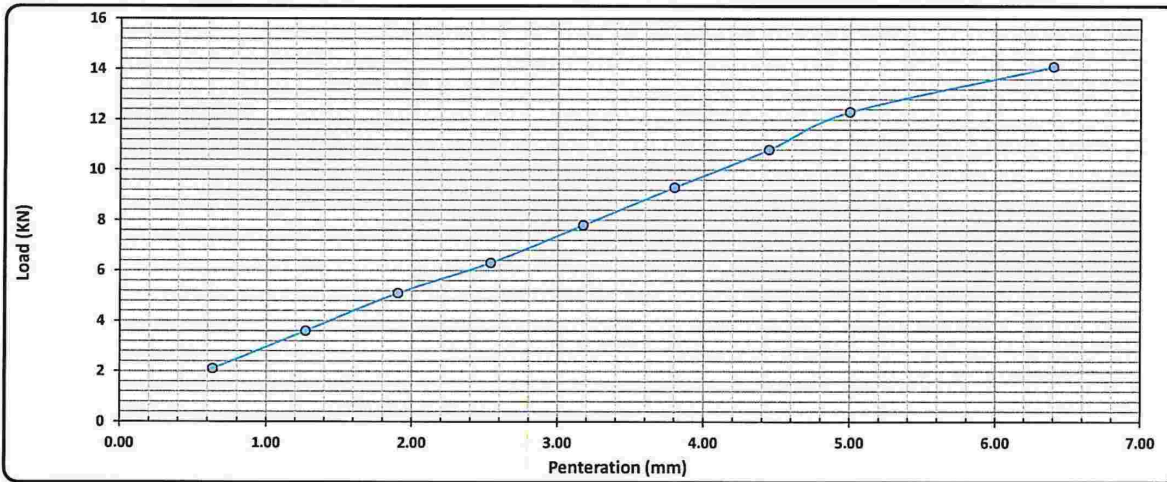
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm ³)	2030
Mold WT. (gm)	5310
Mold WT. + Wet WT. (gm)	10029
Wet WT. (gm)	4719
Wet Density (g/cm ³)	2.325
Dry Density (g/cm ³)	2.169
Proctor Density (g/cm ³)	2.170
Compaction %	100.0

Mositure Ratio After Compacted Mold	
Tare No.	2
Tare WT. (gm)	52.81
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	143.5
Water WT. (gm)	6.5
Dry WT. (gm)	90.7
Moisture Content %	7.2

Swelling	
Mold No.	1
Date	28-01-2023
Intial Height (mm)	5.00
Final Height (mm)	5.00
Difference	0
Sample Height (mm)	12.00
Swelling Ratio %	0%

Loading Reading :

Penteration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (mm)	0.07	0.12	0.17	0.21	0.26	0.31	0.36	0.41	0.47
Load (KN)	2.1	3.6	5.1	6.3	7.8	9.3	10.8	12.3	14.1



Calculations :-

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	% عند نسبة 98
2.50	6.30	13.4	47.2%	100	98	46.3%
5.00	12.30	20.0	61.4%			60.2%

Lab. Specialist

Name :

Sign :

Lab. Engineer

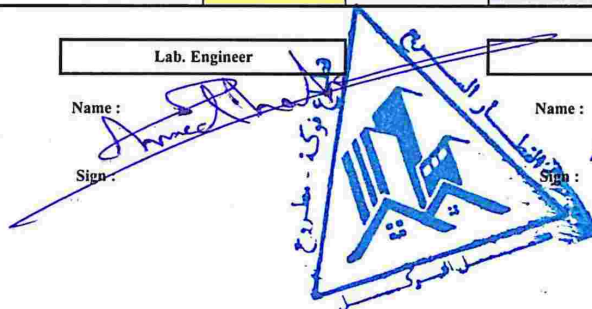
Name :

Sign :

Consultant Engineer

Name :

Sign :



MATERIAL INSPECTION REQUEST



Contractor Company	AL-FAYROUZ COMPANY			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MIR	C1 K.P 506	C2 EW	C3 CS	DD 24	MM 1	YY 23	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials		REPLACEMENT FILL MATERIAL RESULTS				
Location to be Used	FROM	TO	LEVEL			
	506+700	506+860	(-1.75)			
	506+000	506+200	(-1.5)			
	506+200	506+300	(-1.5)			
MAR Approval No					Date	
Supplier Name						
Test Requirement		Specification			Clause	
Reference Photos		Yes attached / No			Other	
Item	Description	Unit	Quantity	Arrival Date	Note	
1	SEIVE ANALYSIS	M ³	5000	24/1/2023		
2	ATTERBERG	M ³	5000	24/1/2023		
3	PROCTOR	M ³	5000	24/1/2023		
4	CBR	M ³	5000	28/1/2023		
Comments by:			Comments by:			
APPROVAL STATUS						
Organisation	Name	Sign	Date	A-AWC-R		
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed</i>				
QA/QC *	<i>Mostafa Abo Ali</i>	<i>Mostafa Abo Ali</i>				
GARB**						
Employers Representative						

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	ENG/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MAR	C1 KP. 506	C2 EW	C3 CS	DD 28	MM 1	YY 23	HH	MM

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

Description of Materials	PREPARED SUBGRADE			
Location to be Used	FROM	TO	LEVEL	
	506+700	506+860	(-1.75)	
	506+000	506+200	(-1.5)	
	506+200	506+300	(-1.5)	
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P.L	
3	ASTM D 1557	PROCTOR	2.17	
4	ASTM D 18832	CBR	60.2%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed</i>		
QA/QC *	<i>Mostafa Abo Ali</i>	<i>Mostafa Abo Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

Operating lap Al Tewkol Central Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	28-01-2023	code	ZONE	506+700	506+820
LOCATION	بلاطة من القطاع	FZ (3)	Material		
NAME COMPANY	القيروز		layer thickness		

visual inspection test

Gradient test

-gradation of bulk materials				SAMPLE WEIGHT [g]		25695.00		gm	table classify
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS	soil classify
Mass retained (g)	2516.0	1748.0	1368.0	1511.0	1624.0	1635.0	1788.0		A-1-b
Cumulative Retained (g)	2516.0	4264.0	5632.0	7143.0	8767.0	10402.0	12190.0	PRO	2.15
Cumulative Retained %	9.8	16.6	21.9	27.8	34.1	40.5	47.4	WC	8.1
Cumulative Passing %	90.2	83.4	78.1	72.2	65.9	59.5	52.6	CBR	55.8

-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	70.00	215.00	375.00					
Cumulative Retained %	14.00	43.00	75.00					
Cumulative Passing %	86.00	57.00	25.00					

-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	90.2	83.4	78.1	72.2	65.9	59.5	52.6	45.2	30.0	13.1

ATTERBERG LIMITS	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)
	N.L	N.P	N.P

Contractor

Consultant

Mostafa Abo Ali

	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH From Station 504+000 To Station 568+177		

PROCTOR TEST

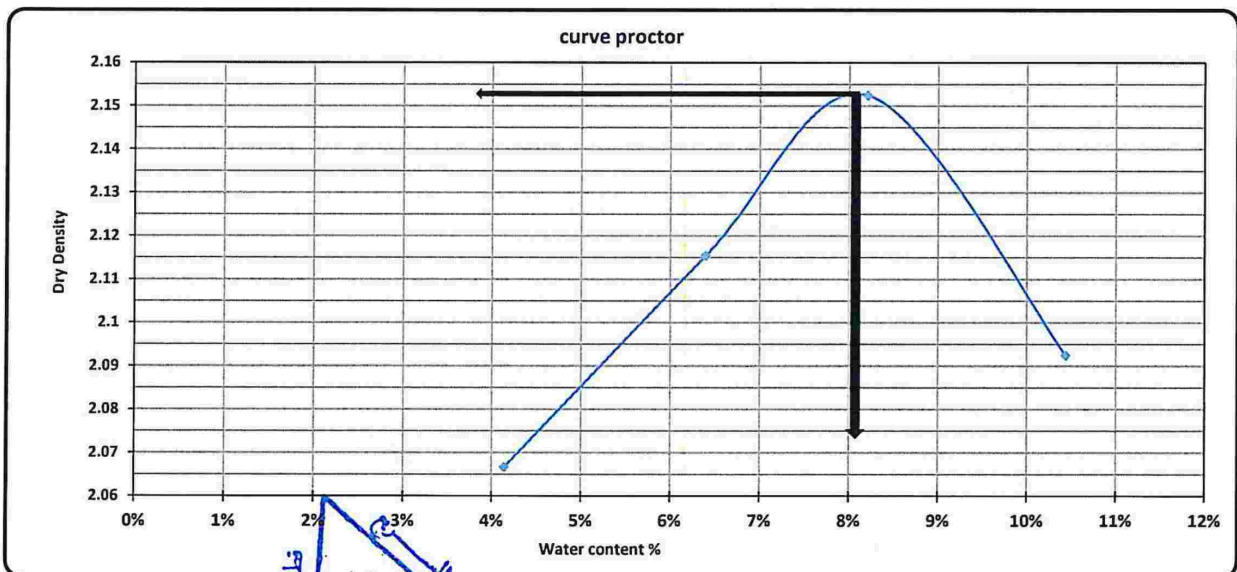
TESTING DATE:	28-01-2023	code	Station	506+700	506+820
LOCATION	بلاطة من القطاع	FZ (3)	Material		
NAME COMPANY	الفيروز		layer thickness		

Weight of empty mold :	5620.0
Mold Volume:	2030.0

MAX Dry Density	2.152
Water content %	8.1

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	9989.0	10189.0	10348.0	10311	
WT. WET SOIL	4369.0	4569.0	4728.0	4691.0	
Wt. Density	2.152	2.251	2.329	2.311	

Tare No.	2	7	20	21	4	5	11	12		
Tare wt.	52.81	53.52	55.01	55.38	55.33	56.36	55.37	54.83		
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0		
Wt. Of dry soil & tare	146.2	146.1	144.5	144.1	143.0	142.7	141.0	141.1		
Wt. Of water	3.8	3.9	5.5	5.9	7.0	7.3	9.0	8.9		
Wt. Of dry soil	93.4	92.6	89.5	88.7	87.7	86.4	85.6	86.3		
Water content %	4.1%	4.2%	6.1%	6.7%	8.0%	8.4%	10.6%	10.3%		
AV. Water content %	4.1%		6.4%		8.2%		10.4%			
Dry Density	2.067		2.115		2.152		2.092			



Contractor

Ahmed Hamed

Consultant

Mostafa Abo Ali

Electric Express Train - HSR

California Bearing Ratio TEST

Testing Date :	31-01-2023	Code	FROM STA :	506+700	506+820
Location :	بلاطة من القطاع	FZ (3)	: Material		
Company Name	الفيروز		: Layer Thickness		

- : Test Results

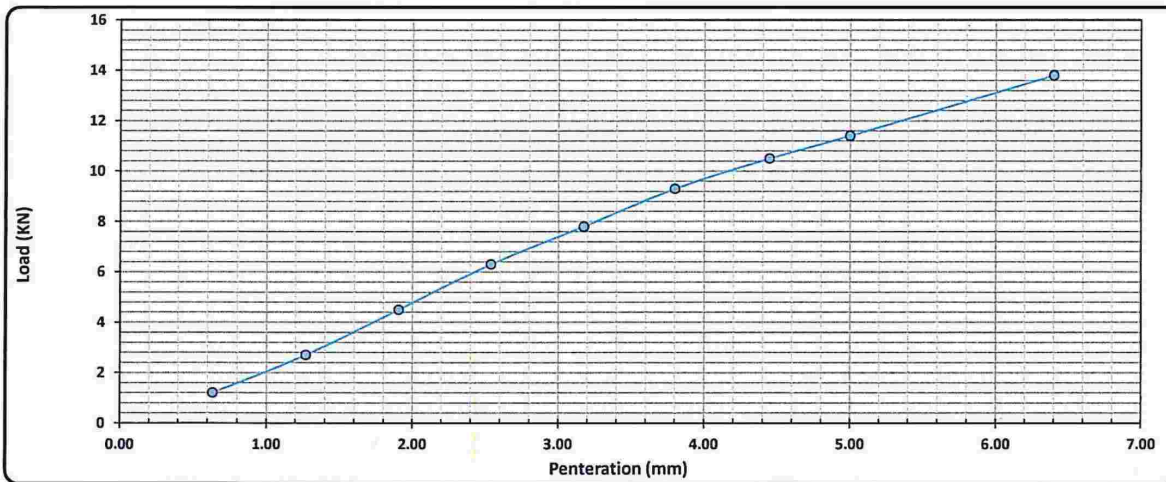
Compaction % for Mold	
Mold No.	2
Mold Vol.(cm ³)	2168
Mold WT. (gm)	5089
Mold WT. + Wet WT. (gm)	10121
Wet WT. (gm)	5032
Wet Density (g/cm ³)	2.321
Dry Density (g/cm ³)	2.149
Proctor Density (g/cm ³)	2.150
Compaction %	100.0

Moisture Ratio After Compacted Mold	
Tare No.	24
Tare WT. (gm)	55.38
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	143
Water WT. (gm)	7.0
Dry WT. (gm)	87.6
Moisture Content %	8.0

Swelling	
Mold No.	2
Date	31-01-2023
Initial Height (mm)	5.50
Final Height (mm)	5.50
Difference	0
Sample Height (mm)	11.80
Swelling Ratio %	0%

Loading Reading :

Penteration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (mm)	0.04	0.09	0.15	0.21	0.26	0.31	0.35	0.38	0.46
Load (KN)	1.2	2.7	4.5	6.3	7.8	9.3	10.5	11.4	13.8



Calculations :-

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	% عند نسبة 98
2.50	6.30	13.4	47.2%	100	98	46.3%
5.00	11.40	20.0	56.9%			55.8%

Lab. Specialist

Name :

Sign :

Lab. Engineer

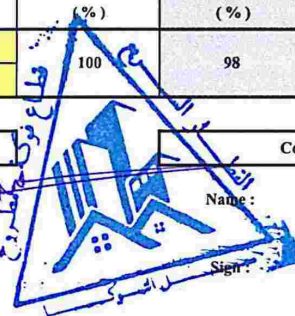
Name :

Sign :

Consultant Engineer

Name :

Sign :



MATERIAL INSPECTION REQUEST



Contractor Company	AL-FAYROUZ COMPANY			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MIR	C1 K.P 506	C2 EW	C3 CS	DD 28	MM 1	YY 23	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
Location to be Used	FROM	TO	LEVEL		
	506+300	506+600	(-1.5)		
	506+600	506+860	(-1.5)		
	506+200	506+340	(-1.25)		
MAR Approval No				Date	
Supplier Name					
Test Requirement	Specification			Clause	
Reference Photos	Yes attached / No			Other	
Item	Description	Unit	Quantity	Arrival Date	Note
1	SEIVE ANALYSIS	M ³	5000	28/1/2023	
2	ATTERBERG	M ³	5000	28/1/2023	
3	PROCTOR	M ³	5000	28/1/2023	
4	CBR	M ³	5000	31/1/2023	

Comments by:	Comments by:

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed Mostafa</i>		
QA/QC *	<i>Mostafa Abo Ali</i>	<i>Mostafa Abo Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	ENG/ MOHAMED TAHA	<i>Mohamed Taha</i>									
Received by ER			MAR	C1 KP. 506	C2 EW	C3 CS	DD 31	MM 1	YY 23	HH	MM

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

Description of Materials	PREPARED SUBGRADE			
Location to be Used	FROM	TO	LEVEL	
	506+300	506+600	(-1.5)	
	506+600	506+860	(-1.5)	
	506+200	506+340	(-1.25)	
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P.L	
3	ASTM D 1557	PROCTOR	2.15	
4	ASTM D 18832	CBR	55.8%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed Mostafa</i>	<i>Mohammed</i>		
QA/QC *	<i>Mostafa Abo Ali</i>	<i>Mostafa Abo Ali</i>		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي د. خالد قنديل	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARSA MATROUH From Station 504+000 To Station 568+177	 الجمهورية العربية السورية وزارة التخطيط (M.P.O.)
Operating lap	Al Tawkol Central Lab	

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	12-03-2023	code	ZONE	506+000	507+000
LOCATION	KP (506+500)	P.S.G/FZ (1)	Material		
NAME COMPANY	المفروز		layer thickness		

1-visual inspection test

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT [g]		64550.00		gm	table classify	
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS	soil classify	
Mass retained (g)	0.0	2180.0	10710.0	6600.0	5620.0	2770.0	13630.0		A-1-a	
Cumulative Retained (g)	0.0	2180.0	12890.0	19490.0	25110.0	27880.0	41510.0		PRO	2.20
Cumulative Retained %	0.0	3.4	20.0	30.2	38.9	43.2	64.3		WC	7.8
Cumulative Passing %	100.0	96.6	80.0	69.8	61.1	56.8	35.7		CBR	67.2

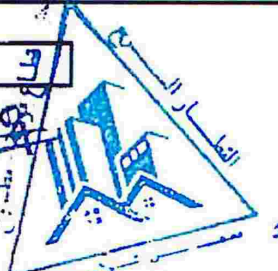
B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	60.00	230.00	340.00					
Cumulative Retained %	12.00	46.00	68.00					
Cumulative Passing %	88.00	54.00	32.00					

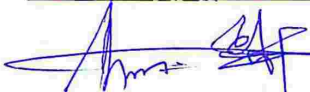
C-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	100.0	96.6	80.0	69.8	61.1	56.8	35.7	31.4	19.3	11.42

ATTERBERG LIMITS	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)
	N-L	N-P	N-PI

Contractor

Consultant





Electric Express Train - HSR
From El Ain El Sokhna City To El Alamein - MATROUH
Section - 7 From FOKA TO MARSA MATROUH
From Station 504+000 To Station 568+177



PROCTOR TEST

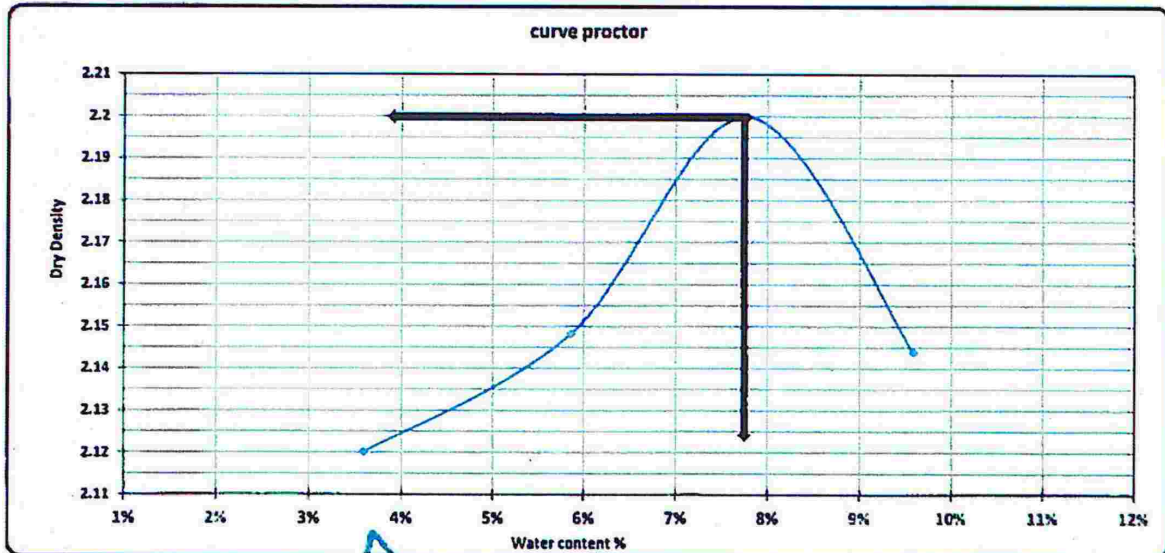
TESTING DATE:	12-03-2023	code	Station	506+000	507+000
LOCATION	KP (506+500)	P.S.G FZ (1)	Material		
NAME COMPANY	الفرع		layer thickness		

Weight of empty mold :	5620.0
Mold Volume:	2124.0

MAX Dry Density	2.20
Water content %	7.8%

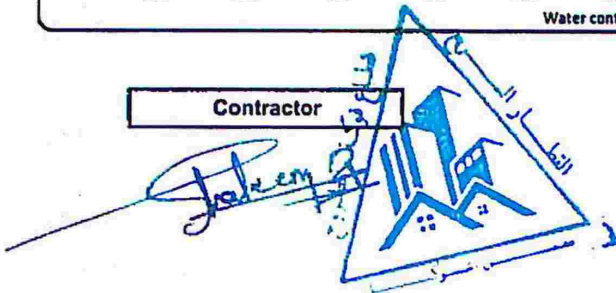
trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10285.0	10450.0	10656.0	10610	
WT. WET SOIL	4665.0	4830.0	5036.0	4990.0	
Wt. Density	2.196	2.274	2.371	2.349	

Tare No.	23	7	5	6	9	8	10	12		
Tare wt.	54.4	55.53	56.3	53.97	55.85	57.07	55.43	54.83		
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0		
Wt. Of dry soil & tare	146.60	146.80	144.80	144.70	143.40	143.10	141.80	141.60		
Wt. Of water	3.4	3.2	5.2	5.3	6.6	6.9	8.2	8.4		
Wt. Of dry soil	92.2	91.3	88.5	90.7	87.6	86.0	86.4	86.8		
Water content %	3.7%	3.5%	5.9%	5.8%	7.5%	8.0%	9.5%	9.7%		
AV. Water content %	3.6%		5.9%		7.8%		9.6%			
Dry Density	2.120		2.148		2.200		2.144			



Contractor

Consultant



Handwritten signature of the Consultant.

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد قنديل		Electric Express Train - HSR	
		From El Ain El Sokhna City To El Alamein - MATROUH	
		Section - 7 From FOHA To MARSA MATROUH	
		From Station 504+000 To Station 508+177	

**Absorbition & Aggregate specific gravity
AASHTO-T85**

TESTING DATE:	15/03/2023	code	Station	506+000	507+000
LOCATION	KP (506+500)	P.S.G FZ (1)	Material		
NAME COMPANY	الابرويز		layer thickness		

Weight of sample	2500	gm
Weight of saturated -dry surface sample (B)	2530	gm
Weight of saturated sample in water (C)	1520	gm
Weight of dry sample after heating (A)	2455	gm

Results:-

Bulk specific gravity = A / (B-C)	2.431	
Apparent specific gravity = A /(A-C)	2.626	
Asorbtlon = (B-A)/A	3.055	%

Los Anglos Abrasion AASHTO-T96

Results:-

Weight of sample before test (gm)	Weight of sample after test (gm)	Abrasion ratio (%)
5000	3510	29.80

Lab. Specialist

Name :

Sign :

Lab. Engineer

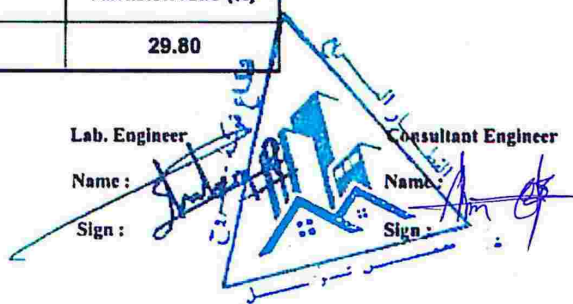
Name :

Sign :

Consultant Engineer

Name :

Sign :



	Electric Express Train - HSR	
---	--	---

California Bearing Ratio TEST

Testing Date :	18-03-2023	Code	FROM STA :	506+000	507+000
Location :	K.P (508+500)	P.S.G FZ (1)	: Material		
Company Name	النبروز		: Layer Thickness		

:- Test Results

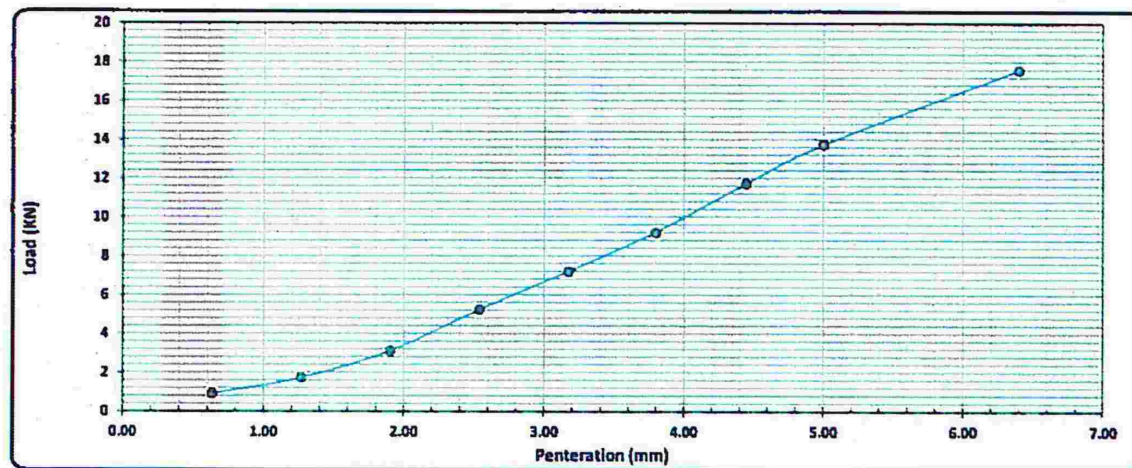
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm ³)	2120
Mold WT. (gm)	5310
Mold WT. + Wet WT. (gm)	10338
Wet WT. (gm)	5028
Wet Density (g/cm ³)	2.372
Dry Density (g/cm ³)	2.199
Proctor Density (g/cm ³)	2.200
Compaction %	99.9

Moisture Ratio After Compacted Mold	
Tare No.	6
Tare WT. (gm)	53.97
Tare WT. + Wet WT. (gm)	150
Tare WT. + Dry WT. (gm)	143
Water WT. (gm)	7.0
Dry WT. (gm)	89.0
Moisture Content %	7.9

Swelling	
Mold No.	1
Date	18-03-2023
Initial Height (mm)	5.00
Final Height (mm)	5.11
Difference	0.11
Sample Height (mm)	120
Swelling Ratio %	0.09%

Loading Reading :

Penetration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (Kg)	100	190	345	580	798	1021	1301	1525	1954
Load (KN)	0.9	1.7	3.1	5.2	7.2	9.2	11.7	13.7	17.6



Calculations :-

Penetration (mm)	Load (KN)	Standard Load (lb)	CBR (%)	Mold - Compaction (%)	Compaction (%)	CBR % عند نسبة 98
2.50	5.22	13.4	39.1%	100	98	38.3%
5.00	13.73	20.0	68.5%			67.2%

Lab. Specialist

Name :

Sign :

Lab. Engineer

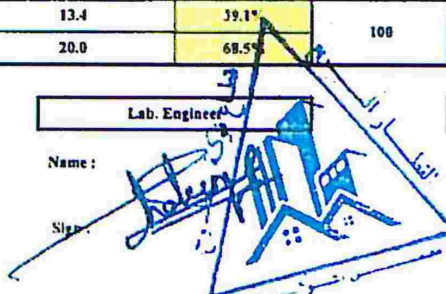
Name :

Sign :

Consultant Engineer

Name :

Sign :



Handwritten signature of the Consultant Engineer.

MATERIAL INSPECTION REQUEST	
--	--

Contractor Company	AL-FAYROUZ COMPANY			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	Mohamed Taha									
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM
				K P 506	EW	CS	12	3	23		

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
Location to be Used	FROM	TO	LEVEL		
	506+000 506+000	506+700 506+460	preparedsubgrade 1 (+0.25) preparedsubgrade 2 (+0.50)		
MAR Approval No				Date	
Supplier Name					
Test Requirement	Specification			Clause	
Reference Photos	Yes attached / No		Other		
Item	Description	Unit	Quantity	Arrival Date	Note
1	SEIVE ANALYSIS	M ³	5000	12/3/2023	
2	ATTERBERG	M ³	5000	12/3/2023	
3	LOS ANGLOS	M ³	5000	15/3/2023	
4	ABSORPTION & AGGREGATE SPECIFIC GRAVITY	M ³	5000	15/3/2023	
5	PROCTOR	M ³	5000	12/3/2023	
6	CBR	M ³	5000	18/3/2023	
Comments by:		Comments by:			

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mohammed Mostafa	Mohammed		
QA/QC *	Amr	Amr		
GARB**				
Employers Representative				

* Designer
** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ		Designer Company	
Issued by Contractor	Name	Sign	Date	Time
	ENG/ MOHAMED TAHA	Mohamed Taha		
Received by ER			MAR	

C1	C2	C3	DD	MM	YY	HH	MM
KP. 506	EW	CS	18	3	23		

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

Description of Materials	PREPARED SUBGRADE			
Location to be Used	FROM	TO	LEVEL	
	506+000 506+000	506+700 506+460	preparedsubgrade 1 (+0.25) preparedsubgrade 2 (+0.50)	
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P	
3	ASTM C 535	LOS ANGLOS	29.8	
4	ASTM C 127 ASTM D 6473	ABSORPTION & AGGREGATE SPECIFIC GRAVITY	3.055	
5	ASTM D 1557	PROCTOR	2.20	
6	ASTM D 18832	CBR	67.2%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mohammed Hossain	Mohammed		
QA/QC *				
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

MATERIAL INSPECTION REQUEST



Contractor Company	AL-FAYROUZ COMPANY			Designer Company							
Issued by Contractor	Name	Sign	Date	Time							
	Eng/ MOHAMED TAHA	Mohamed Taha									
Received by ER			MIR	C1 K.P 506	C2 EW	C3 CS	DD 18	MM 5	YY 23	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp 506 Note For Kilometer point only Start Km is used
CODE-2	Work Activity		
CODE-3	Sub Element of Activity		

Description of Materials		REPLACEMENT FILL MATERIAL RESULTS			
Location to be Used	FROM	TO	LEVEL		
	506+000	506+860	SuBBallast 1 (0.70)		
	506+000	506+860	SuBBallast 2 (0.90)		
MAR Approval No				Date	
Supplier Name					
Test Requirement	Specification		Clause		
Reference Photos	Yes attached / No	Other			
Item	Description	Unit	Quantity	Arrival Date	Note
1	SEIVE ANALYSIS	M ³	5000	17/5/2023	
2	ATTERBERG	M ³	5000	17/5/2023	
3	LOS ANGLOS	M ³	5000	17/5/2023	
4	ABSORPTION & AGGREGATE SPECIFIC GRAVITY	M ³	5000	17/5/2023	
5	PROCTOR	M ³	5000	17/5/2023	
6	CBR	M ³	5000	17/5/2023	
Comments by:			Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mohammed Mostafa	Mohammed		
QA/QC *	Youssef Ragab	Youssef Ragab		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	AL-FAYROUZ		Designer Company																
Issued by Contractor	Name	Sign	Date	Time															
	ENG/ MOHAMED TAHA	<i>Mohamed Taha</i>																	
Received by ER			MAR																
			<table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td>KP. 506</td> <td>EW</td> <td>CS</td> <td>18</td> <td>5</td> <td>23</td> <td></td> <td></td> </tr> </table>	C1	C2	C3	DD	MM	YY	HH	MM	KP. 506	EW	CS	18	5	23		
C1	C2	C3	DD	MM	YY	HH	MM												
KP. 506	EW	CS	18	5	23														

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

Description of Materials	SUBBALLAST			
Location to be Used	FROM	TO	LEVEL	
	506+000 506+000	506+860 506+860	SuBBallast 1 (0.70) SuBBallast 2 (0.90)	
ITEM	SPECIFICATION	TEST REQUIRMENT	TEST RESULT ATTACHMENT	REMARKS
1	ASTM D 6913	SEIVE ANALYSIS	ACCORDING TO SPECIFICATION	
2	ASTM D 4318	ATTERBERG	N.P	
3	ASTM C 535	LOS ANGLOS	22	
4	ASTM C 127 ASTM D 6473	ABSORPTION & AGGREGATE SPECIFIC GRAVITY	2.502	
5	ASTM D 1557	PROCTOR	2.216	
6	ASTM D 18832	CBR	94.33%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	<i>Mohammed M. S. S. S.</i>	<i>Mohammed</i>		
QA/QC *	<i>Youssef Rafab</i>	<i>Youssef Rafab</i>		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

 KK ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد فاضل	 SVS TRA SHAFER	Electric Express Train - H8R From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARS MATROUH From Station 504+000 To Station 568+177	 الهيئة العامة للتخطيط والدراسات الاقتصادية (GABRI)
Operating Lab	NEGIDA CENTRAL LAB		

PARTICLE SIZE DISTRIBUTION OF SUBBALLAST

TESTING DATE:	13-5-2023	Code	Zone	FROM STATION	TO STATION
LOCATION	KP 506+500	FZ-S1		506+000	507+000
NAME COMPANY	AL Fauroz				

1-visual inspection test

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT (g)		23848.00		gm	Table classify	
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS	Soil Classify	A-1-a
Mass retained (g)	0.0	709.0	378.0	5838.0	3037.0	2130.0	4066.0		PRO	2.216
Cumulative Retained (g)	0.0	709.0	1087.0	6925.0	9962.0	12092.0	16158.0		WC	6.80
Cumulative Retained %	0.0	3.0	4.6	29.0	41.8	50.7	67.8		CBR	94.33%
Cumulative Passing %	100.0	97.0	95.4	71.0	58.2	49.3	32.2		Los Angles	22
									SPECIFIC .Gravity	2.502

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	141.00	322.00	426.00					
Cumulative Retained %	28.20	64.40	85.20					
Cumulative Passing %	71.80	35.60	14.80					

C-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	100.0	97.0	95.4	71.0	58.2	49.3	32.2	23.2	11.5	4.8
SPECIFICATION	—	97	—	70 — 75	—	15 — 60	—	0 — 35	—	0 — 5

ATTERBERG LIMITS	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)
	—	—	N.P

Contractor

Consultant

Youssef Rafab

شركة نجيدة للمقاولات
 المعمل المركزي
 مشروع القطار السريع / فوكة - مطروح

	Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH From Station 504+000 To Station 508+177		

PROCTOR TEST (SUBBALLAST)

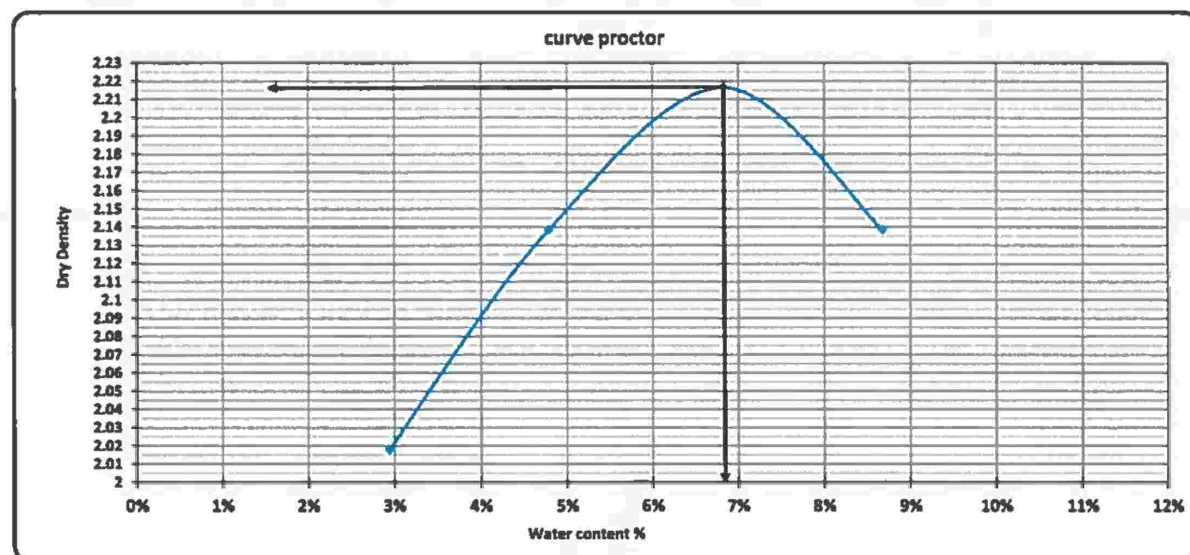
TESTING DATE:	045+060	Code	zone	FROM	TO
LOCATION	KP 506+500	FZ-S1		506+000	507+000
NAME COMPANY	AL Fauroz				

Weight of empty mold :	5698.0
Mold Volume:	2127.0

MAX Dry Density	2.216
Water content %	6.8

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10117.0	10465.0	10735.0	10642	
WT. WET SOIL	4419.0	4767.0	5037.0	4944.0	
Wt. Density	2.078	2.241	2.368	2.324	

Tare No.	7	19	13	17	15	40	31	32		
Tare wt.	42.2	44.1	53.6	53.2	30.9	46.2	80.7	82.7		
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0		
Wt. Of dry soil & tare	146.3	146.5	144.2	144.0	141.5	141.7	139.3	139.4		
Wt. Of water	3.7	3.6	5.8	6.0	8.5	8.3	10.8	10.6		
Wt. Of dry soil	123.0	123.0	123.0	123.0	123.0	123.0	123.0	123.0		
Water content %	3.0%	2.9%	4.7%	4.9%	6.9%	6.7%	8.7%	8.6%		
AV. Water content %	2.9%		4.8%		6.8%		8.7%			
Dry Density	2.018		2.139		2.217		2.139			



Contractor

شركة نجدة للمقاولات
 العمل المركزي
 مشروع القطار السريع / فوكا - مطروح

Consultant

Youssef Rafab

 ENGINEERING CONSULTING OFFICE المكتب الاستشاري الهندسي أ.د. خالد قنديل	 SYSTEM SUMMER	Electric Express Train - HSR	 محافظة مطروح محافظة مطروح
		From El Ain El Sokhna City To El Alamein - MATROUH	
		Section - 7 From FOKA To MARS MATROUH	
		From Station 504+000 To Station 568+177	

**Absorbtion & Aggregate specific gravity
AASHTO-T85**

SUBBALLAST

TESTING DATE:	15-05-2023	code	zone	FROM	TO
LOCATION	KP 506+500	FZ-S1		506+000	507+000
NAME COMPANY	AL Fauroz				

Weight of sample	4987	gm
Weight of saturated -dry surface sample (B)	5051	gm
Weight of saturated sample in water (C)	3077	gm
Weight of dry sample after heating (A)	4939	gm

Results:-

Bulk specific gravity = $A / (B-C)$	2.502	
Apparent specific gravity = $A / (A-C)$	2.653	
Asorbtlon = $(B-A)/A$	2.268	%

Los Anglos abrasion AASHTO-T96

Results:-

Weight of sample before test (gm)	Weight of sample after test (gm)	Abrasion ratio (%)
5000	3890	22

Lab. Specialist

Name :

Sign :

Lab. Engineer

Name :

Sign :



Consultant Engineer

Name : *Youssef Ragab*

Sign :



Electric Express Train - HSR



Operating Lab: NEGIDA CENTRAL LAB

California Bearing Ratio TEST

		SUBBALLAST			
Testing Date :	16/5/2023	Code	ZONE	FROM	TO
Location :	KP 506+500	FZ-S1		506+000	507+000
Company Name	AL Fauroz				

Test Results

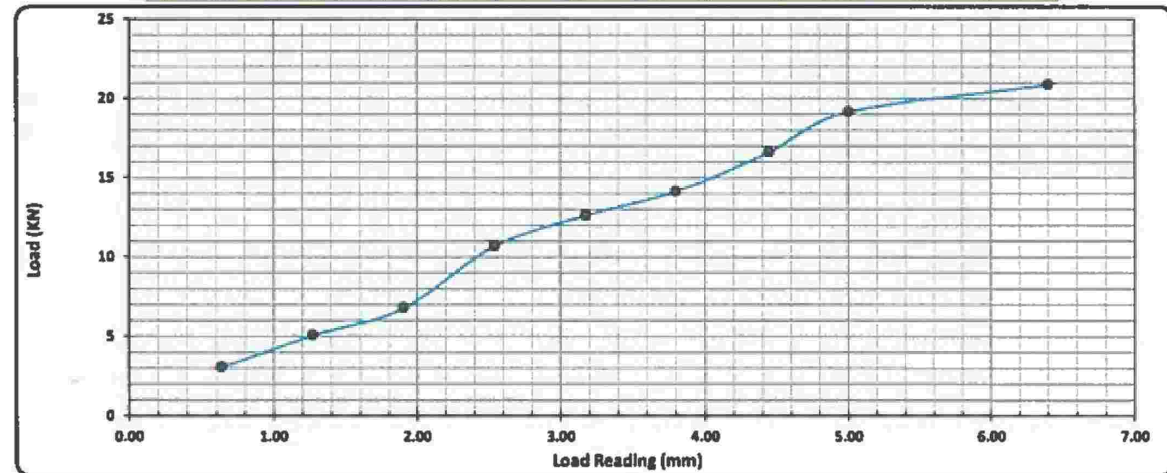
Compaction % for Mold	
Mold No.	2
Mold Vol. (cm ³)	2134
Mold WT. (gm)	8227
Mold WT. + Wet WT. (gm)	13335
Wet WT. (gm)	5108
Wet Density (g/cm ³)	2.394
Dry Density (g/cm ³)	2.248
Proctor Density (g/cm ³)	2.216
Compaction %	101.4

Moisture Ratio After Compacted Mold	
Tare No.	15
Tare WT. (gm)	31.9
Tare WT. + Wet WT. (gm)	150
Tare WT. + Dry WT. (gm)	142.8
Water WT. (gm)	7.2
Dry WT. (gm)	110.9
Moisture Content %	6.5

Swelling	
Mold No.	2
Date	16/5/2023
Initial Height (mm)	0.00
Final Height (mm)	0.00
Difference	0
Sample Height (mm)	120.00
Swelling Ratio %	0.0%

Loading Reading :

Load Reading (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load (KN)	3.1	5.1	6.8	10.7	12.6	14.2	16.6	19.2	20.9
Load (KG)	315.0	519.0	695.0	1092.0	1290.0	1444.0	1695.0	1955.0	2132.0



Calculations :-

Penetration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(KN)	(lb)	(%)	(%)	(%)	100 % نسبة 100
2.50	10.70	13.4	89.3%	101.4	100	79.0%
5.00	19.16	20.0	95.7%			94.3%

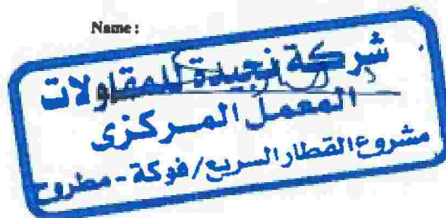
Lab. Specialist

Name :

Sign :

Lab. Engineer

Name :



Consultant Engineer

Name : Youssef Ragab

Sign :