MATERIAL INSPECTION REQUEST

Contractor Company	**GOMAA BADER COMPANY**			Designer Company							
Contractor Refrence	**GB63-SB-7**										
Issued by Contractor	Name	Sign		Date 3/9/2023			Time				
	Eng/ AHMED FOUAD										
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM
							3	9	2023		

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	SUBBALLAST		
Location to be Used	563+600 TO 563+800 (0.7) 563+800 TO 563+920 (0.7) 564+120 TO 564+360 (0.7)		
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	2/9/2023	
2	Atterberg Limits	M^3	5000	2/9/2023	
3	Proctor	M^3	5000	2/9/2023	
4	Los Anglos	M^3	5000	2/9/2023	
5	specific gravity	M^3	5000	3/9/2023	
6	CBR	M^3	5000	3/9/2023	

Comments by:	Comments by:
	نتائج الصلاحيات والمرفقات مطابقة لكميات حوالي 1000 م.م مكعب

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG/ AHMED FOUAD			
QA/QC *	Youssef Ragab	Youssef		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST

Contractor Company	**GOMAA BADER COMPANY**			Designer Company								
Contractor Refrence	**GB63-SB-7**											
Issued by Contractor	Name	Sign		Date 3/9/2023					Time			
	Eng/ AHMED FOUAD											
Received by ER			MAR	C1	C2	C3	DD	MM	YY	H H	MM	
							3	9	2023			

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	Sub Ballast			
Location to be Used	563 K.M			
Item	Spacification	Test Requirment	Test Result Attachment	Remark
1	ASTM D 75	Aggregate Sampling	According Spacification	
2	ASTM C 136	Sieve Analysis	According Spacification	
3	ASTM D 1440	Passing Sieve #200	3.5%	
4	ASTM D 4318	Atterberg Limit	N.P	
5	ASTM D 2974	Moisture content	7.3%	
6	ASTM D 1557	Modifid Proctor	2.222	
7	ASTM C 335	Los Anglos	24.08%	
8	ASTM D 6473	specific gravity	2.524	
9	ASTM D 1883	CBR	91.4%	
Comments by:		**Comments by:**		
		نتائج الصلاحيات والمرفقات مطابقة لكميات حوالي 1000 م.م مكعب		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG/ AHMED FOUAD			
QA/QC *	Youssef Rafat	Youssef		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

Electric Express Train - HSR

From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA To MARSA MATROUH

From Station 554+000 To Station 568+177

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE	2/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-7	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
1-visual inspection test	operate by	Gomaa Bader Lab			

2-Gradient test

A-gradation of bulk materials

				SAMPLE WEIGHT [g]		20145.00		gm		table classify
sieve size	3	1 1/2	1	3/4	1/2	3/8	# 4	PASS		soil classify
Mass retained (g)	0.0	811.0	2195.0	2260.0	1650.0	3420.0	4810.0			A-1-a
Cumulative Retained (g)	0.0	811.0	3006.0	5266.0	6916.0	10336.0	15146.0		PRO	2.222
Cumulative Retained %	0.0	4.0	14.9	26.1	34.3	51.3	75.2		WC	7.3%
Cumulative Passing %	100.0	96.0	85.1	73.9	65.7	48.7	24.8		B.S.G	2.524
									CBR	91.4%

B-soft material gradation

				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	205.00	363.00	429.00					
Cumulative Retained %	41.00	72.60	85.80					
Cumulative Passing %	59.00	27.40	14.20					

C-General gradient

sieve size(in)	3	1 1/2	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	96.0	85.1	73.9	65.7	48.7	24.8	14.6	6.8	3.5

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

Contractor

Consultant

Youssef Ragab

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 569+177

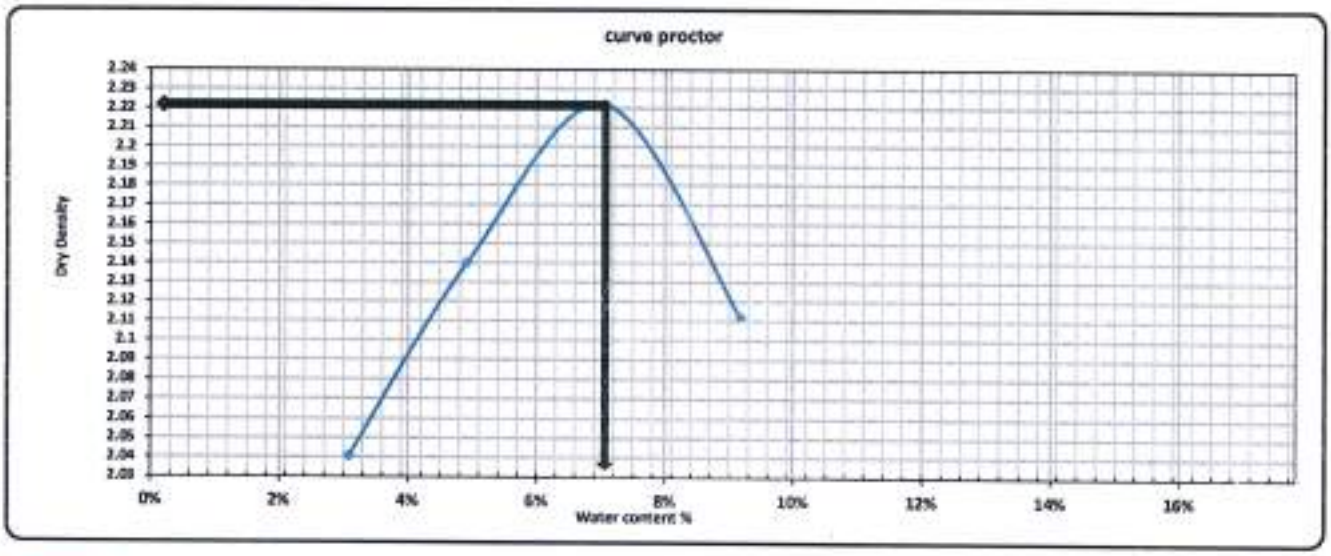
PROCTOR TEST

TESTING DATE	2/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-7	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
	operate by	GOMAA BADR LAB			

Weight of empty mold :	6090.0	MAX Dry Density	2.222
Mold Volume:	2104.9	Water content %	7.30

trial no :	1	2	3	4		
Wt. Of Mold+ wet soil	10526.0	10825.0	11106.0	10952		
WT. WET SOIL	4436.0	4735.0	5016.0	4862.0		
Wt. Density	2.107	2.250	2.383	2.310		

Tare No.	5	5	11	11	8	8	2	2				
Tare wt.	26.2	26.2	27.1	27.1	22.7	22.7	25.4	25.4				
Wt. Of wet soil & tare	115.6	115.6	139.3	139.3	145.4	145.4	158.6	158.6				
Wt. Of dry soil & tare	112.78	112.78	133.8	133.8	137.05	137.05	147.2	147.2				
Wt. Of water	2.8	2.8	5.5	5.5	8.3	8.3	11.4	11.4				
Wt. Of dry soil	86.6	86.6	106.7	106.7	114.4	114.4	121.8	121.8				
Water content %	3.3%	3.3%	5.1%	5.1%	7.3%	7.3%	9.4%	9.4%				
AV.Water content %	3.3%		5.1%		7.3%		9.4%					
Dry Density	2.040		2.140		2.222		2.112					



Contractor

Consultant

Youssef

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 FOKA To MARSA MATROUH
From Station 504+000 To Station 568+177

Absorbtion & Aggregate specific gravity AASHTO-T85

TESTING DATE:	3/9/2023	code	ZONE	562+000	565+000
LOCATION	K.P 563+000	GB-SB-7	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				

Weight of sample	2000.00	gm
Weight of saturated -dry surface sample (B)	2032.00	gm
Weight of saturated sample in water (C)	1242.35	gm
Weight of dry sample after heating (A)	1993.30	gm

Results:-

Bulk specific gravity = A / (B-C)	2.524	
Apparent specific gravity = A /(A-C)	2.654	
Asorbtion = (B-A)/A	1.942	%

Los Anglos abrasion AASHTO-T96

Results:-

Weight of sample before test (gm)	Weight of sample after test (gm)	Abrasion ratio (%)
5000	3796	24.08

Lab. Engineer
Name:
Sign:

OPERATE BY
GOMAA BADR LAB

Consultant Engineer
Name : Youssef Rafat
Sign : Youssef 3/9/2023

Electric Express Train - HSR

California Bearing Ratio TEST

TESTING DATE	3/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-6	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
	operate by	GOMAA BADR LAB			

-: Test Results

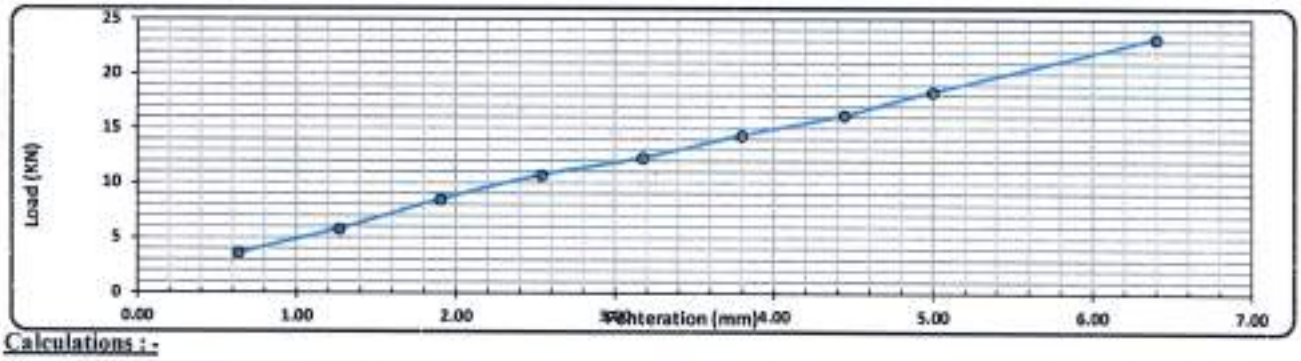
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm^3)	2177.4
Mold WT. (gm)	16444
Mold WT. + Wet WT. (gm)	21573
Wet WT. (gm)	5129
Wet Density (g/cm^3)	2.356
Dry Density (g/cm^3)	2.203
Procter Density (g/cm^3)	2.222
Compaction %	99

Moisture Ratio After Compacted Mold	
Tare No.	10
Tare WT. (gm)	24.50
Tare WT. +Wet WT. (gm)	184.48
Tare WT. +Dry WT. (gm)	174.1
2853	10.3
Dry WT. (gm)	149.5
Moisture Content %	6.9

Swelling	
Mold No.	1
Date	2/8/
Intial Height (mm)	0.00
Final Height (mm)	0.01
Difference	0
Sample Height (mm)	181.00
Swelling Ratio %	0%

Loading Reading :

penetration	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (kg)	362.00	586.00	859.00	1086.00	1248.00	1462.00	1648.00	1866.00	2368.00
Load (KN)	3.5	5.7	8.4	10.6	12.2	14.3	16.2	18.3	23.2



Calculations : -

Penteration (mm)	Load (Kn)	Standard Load (lb)	CBR (%)	Mold - Compaction (%)	Compaction (%)	CBR % 100 عند نسبة
2.50	10.64	13.4	79.7%	99	100	80.4%
5.00	18.31	20.0	91.4%			92.2%

Lab Specialist

Name :

Sign :

مشروع القطار الكهربائي السريع
معمل المركزي
(رقم 6)

Consultant Engineer

Name : Youssef Raafat

Sign : Youssef 3/9/2023

MATERIAL INSPECTION REQUEST

Contractor Company	**GOMAA BADER COMPANY**			Designer Company							
Contractor Refrence	**GB63-SB-8**										
Issued by Contractor	Name	Sign		Date 6/9/2023			Time				
	Eng/ AHMED FOUAD										
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM
							6	9	2023		

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	SUBBALLAST				
Location to be Used	562+000 TO 562+100 (0.7) 564+020 TO 564+120 (0.7) 564+820 TO 564+940 (0.7) 564+360 TO 564+420 (0.7) 562+700 TO 562+740 (0.7)				
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	4/9/2023	
2	Atterberg Limits	M^3	5000	4/9/2023	
3	Proctor	M^3	5000	4/9/2023	
4	Los Anglos	M^3	5000	5/9/2023	
5	specific gravity	M^3	5000	5/9/2023	
6	CBR	M^3	5000	6/9/2023	

Comments by:	Comments by:
	نتائج الصلاحيات والمرفقات مطابقة لكميات حوالي 1000 م.ترمكعب

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG/ AHMED FOUAD			
QA/QC *	Youssef Ragab	Youssef		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST

Contractor Company	**GOMAA BADER COMPANY**			Designer Company								
Contractor Refrence	**GB63-SB-8**											
Issued by Contractor	Name	Sign		Date 6/9/2023					Time			
	Eng/ AHMED FOUAD											
Received by ER			MAR	C1	C2	C3	DD	MM	YY	H H	MM	
							6	9	2023			

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	Sub Ballast			
Location to be Used	563 K.M			
Item	Spacification	Test Requirment	Test Result Attachment	Remark
1	ASTM D 75	Aggregate Sampling	According Spacification	
2	ASTM C 136	Sieve Analysis	According Spacification	
3	ASTM D 1440	Passing Sieve #200	5.8%	
4	ASTM D 4318	Atterberg Limit	N.P	
5	ASTM D 2974	Moisture content	7.3%	
6	ASTM D 1557	Modifid Proctor	2.212	
7	ASTM C 335	Los Anglos	22.62%	
8	ASTM D 6473	specific gravity	2.516	
9	ASTM D 1883	CBR	87.4%	
Comments by:		**Comments by:**		
		نتائج الصلاحيات والمرفقات مطابقة لكميات حوا لي 1000 م. تر مكعب		

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

* Designer

** Alignment/Bridges: Culvert only

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

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE	4/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-8	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
1-visual inspection test	operate by	Gomaa Bader Lab			

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT (g)		36368.00		gm		table classify
sieve size	3	1 1/2	1	3/4	1/2	3/8	# 4	PASS		soil classify
Mass retained (g)	0.0	775.0	5175.0	3665.0	3050.0	3610.0	6290.0			A-1-a
Cumulative Retained (g)	0.0	775.0	5950.0	9615.0	12665.0	16225.0	22515.0		PRO	2.212
Cumulative Retained %	0.0	2.2	16.8	27.2	35.7	45.9	63.7		WC	7.3%
Cumulative Passing %	100.0	97.8	83.2	72.8	64.3	54.1	36.3		B.S.G	2.516
									CBR	87.4%

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	169.40	316.50	420.40					
Cumulative Retained %	33.88	63.30	84.08					
Cumulative Passing %	66.12	36.70	15.92					

C-General gradient										
sieve size(in)	3	1 1/2	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	97.8	83.2	72.8	64.3	54.1	36.3	24.0	13.3	5.8

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

Contractor

Gomaa

مشروع القطار السريع
القطاع السابع
معمل المركزى
(رقم 6)

Consultant

Youssef Ragab
5-23

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

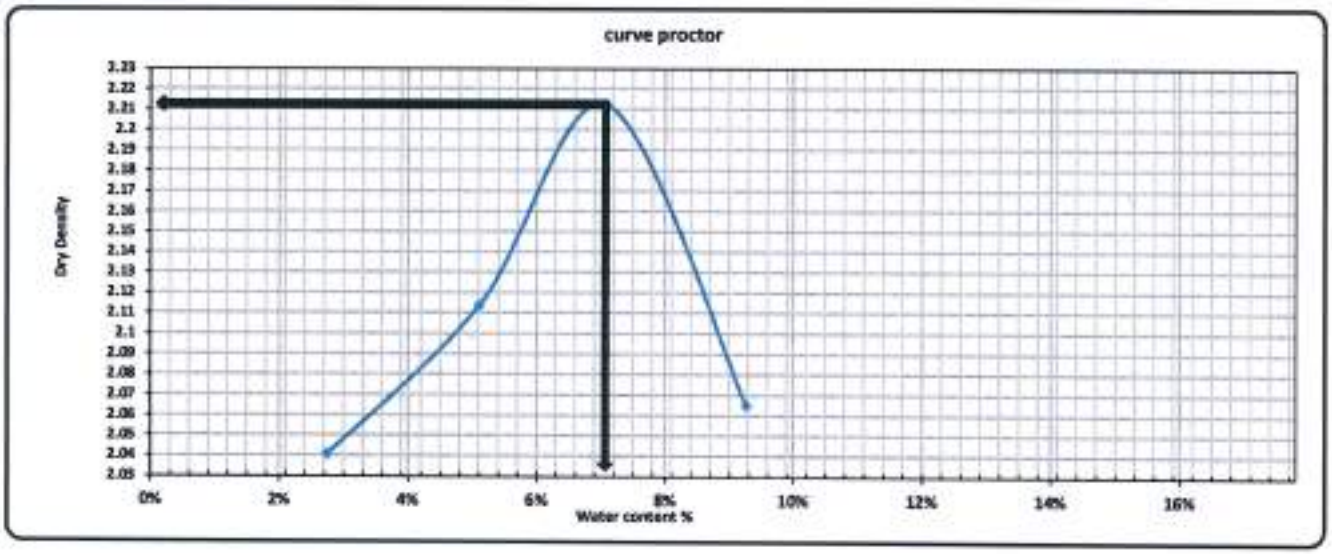
PROCTOR TEST

TESTING DATE	5/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-8	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
	operate by	GOMAA BADR LAB			

Weight of empty mold :	6210.0	MAX Dry Density	2.212
Mold Volume:	2104.9	Water content %	7.30

trial no :	1	2	3	4		
Wt. Of Mold+ wet soil	10632.0	10895.0	11205.0	10968		
WT. WET SOIL	4422.0	4685.0	4995.0	4758.0		
Wt. Density	2.101	2.226	2.373	2.260		

Tare No.	6	6	11	11	20	20	14	14				
Tare wt.	22.25	22.25	23.69	23.69	27.43	27.43	22.86	22.86				
Wt. Of wet soil & tare	135.37	135.37	129.26	129.26	168.27	168.27	138.22	138.22				
Wt. Of dry soil & tare	132.12	132.12	123.93	123.93	158.69	158.69	128.23	128.23				
Wt. Of water	3.3	3.3	5.3	5.3	9.6	9.6	10.0	10.0				
Wt. Of dry soil	109.9	109.9	100.2	100.2	131.3	131.3	105.4	105.4				
Water content %	3.0%	3.0%	5.3%	5.3%	7.3%	7.3%	9.5%	9.5%				
AV.Water content %	3.0%		5.3%		7.3%		9.5%					
Dry Density	2.040		2.113		2.212		2.065					



Contractor

مشروع القطار السريع
القطاع السابع
معمل المركزى
(رقم 6)

Consultant

Youssef

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 FOKA To MARSA MATROUH
From Station 504+000 To Station 568+177

Absorbtion & Aggregate specific gravity AASHTO-T85

TESTING DATE:	5/9/2023	code	ZONE	562+000	565+000
LOCATION	K.P 563+000	GB-SB-8	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				

Weight of sample		
Weight of saturated -dry surface sample (B)	1996.00	gm
Weight of saturated sample in water (C)	1215.90	gm
Weight of dry sample after heating (A)	1963.00	gm

Results:-

Bulk specific gravity = A / (B-C)	2.516	
Apparent specific gravity = A /(A-C)	2.627	
Asorbtion = (B-A)/A	1.681	%

Los Anglos abrasion AASHTO-T96

Results:-

Weight of sample before test (gm)	Weight of sample after test (gm)	Abrasion ratio (%)
5000	3869	22.62

Lab. Engineer
Name :
Sign :

مشروع القطار السريع
معمل المركزى
(رقم 6)

OPERATE BY
GOMAA BADR LAB

Consultant Engineer
Name : Youssef Rafat
Sign :

Electric Express Train - HSR

California Bearing Ratio TEST

TESTING DATE	6/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-8	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
	operate by	GOMAA BADR LAB			

-: Test Results

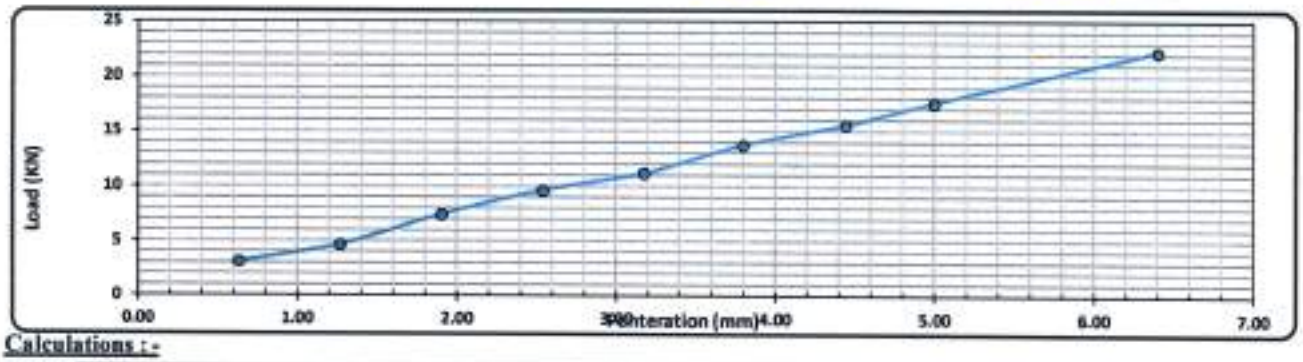
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm^3)	2177.4
Mold WT. (gm)	16444
Mold WT. + Wet WT. (gm)	21530
Wet WT. (gm)	5086
Wet Density (g/cm^3)	2.336
Dry Density (g/cm^3)	2.178
Proctar Density (g/cm^3)	2.212
Compaction %	98

Mositure Ratio After Compacted Mold	
Tare No.	46
Tare WT. (gm)	26.25
Tare WT. +Wet WT. (gm)	180.1
Tare WT. +Dry WT. (gm)	169.7
2853	10.4
Dry WT. (gm)	143.5
Moisture Content %	7.2

Swelling	
Mold No.	1
Date	3/8/
Initial Height (mm)	0.00
Final Height (mm)	0.00
Difference	0
Sample Height (mm)	181.00
Swelling Ratio %	0%

Loading Reading :

penitration	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (kg)	312.00	469.00	751.00	976.00	1134.00	1394.00	1581.00	1786.00	2265.00
Load (KN)	3.1	4.6	7.4	9.6	11.1	13.7	15.5	17.5	22.2



Calculations : -

Penteration (mm)	Load (Kn)	Standard Load (lb)	CBR (%)	Mold - Compaction (%)	Compaction (%)	CBR % 100 عند نسبة
2.50	9.56	13.4	71.6%	98	100	72.8%
5.00	17.50	20.0	87.4%			88.8%

Lab. Specialist	Consultant Engineer
Name :	Name : Youssef Ragab
Sign :	Sign :

مشروع القطار السريع
القطاع الثامن
معمل المركزى
(رقم 6)

MATERIAL INSPECTION REQUEST

Contractor Company	GOMAA BADER COMPANY			Designer Company							
Contractor Refrence	GB63-SB-9										
Issued by Contractor	Name	Sign		Date 16/9/2023				Time			
	Eng/ AHMED FOUAD										
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM
							16	9	2023		

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	SUBBALLAST		
Location to be Used	563+480 TO 563+500 (+0.7) 563+480 TO 563+700 (+0.9) 562+700 TO 562+800 (+0.9)		
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	1000	13/9/2023	
2	Atterberg Limits	M^3	1000	13/9/2023	
3	Proctor	M^3	1000	13/9/2023	
4	Los Anglos	M^3	1000	14/9/2023	
5	specific gravity	M^3	1000	14/9/2023	
6	CBR	M^3	1000	16/9/2023	

Comments by:	Comments by:
	نتائج الصلاحيات والمرفقات مطابقة لكميات حوالي 1000 م.م مكعب

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG/ AHMED FOUAD			
QA/QC *	mohamed elsaid			
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST

Contractor Company	**GOMAA BADER COMPANY**			Designer Company								
Contractor Refrence	**GB63-SB-9**											
Issued by Contractor	Name	Sign		Date 16/9/2023					Time			
	Eng/ AHMED FOUAD	Ahmed Fouad										
Received by ER			MAR	C1	C2	C3	DD	MM	YY	H H	MM	
							16	9	2023			

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	Sub Ballast			
Location to be Used	563 K.M			
Item	Spacification	Test Requirment	Test Result Attachment	Remark
1	ASTM D 75	Aggregate Sampling	According Spacification	
2	ASTM C 136	Sieve Analysis	According Spacification	
3	ASTM D 1440	Passing Sieve #200	4.4%	
4	ASTM D 4318	Atterberg Limit	N.P	
5	ASTM D 2974	Moisture content	7.3%	
6	ASTM D 1557	Modifid Proctor	2.23	
7	ASTM C 335	Los Anglos	24.08%	
8	ASTM D 6473	specific gravity	2.521	
9	ASTM D 1883	CBR	91.9%	
Comments by:		**Comments by:**		
		الصلاحيات والمرفقات مطابقة لكميات حوالي 1000 م٣ مكعب		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG/ AHMED FOUAD	Ahmed Fouad		
QA/QC *	mohamed elsaid	m-elsaid		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

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

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE	13/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-9	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
1-visual inspection test	operate by	Gomaa Bader Lab			

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT [g]		26540.00		gm		table classify
sieve size	3	1 1/2	1	3/4	1/2	3/8	# 4	PASS		soil classify
Mass retained (g)	0.0	1025.0	4535.0	2510.0	2570.0	2995.0	4605.0			A-1-a
Cumulative Retained (g)	0.0	1025.0	5560.0	8070.0	10640.0	13635.0	18240.0		PRO	2.230
Cumulative Retained %	0.0	3.9	20.9	30.4	40.1	51.4	68.7		WC	7.3%
Cumulative Passing %	100.0	96.1	79.1	69.6	59.9	48.6	31.3		B.S.G	2.521
									LOS.	24.08%
									CBR	91.9%

B-soft material gradation				WT.OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	167.00	338.00	429.00					
Cumulative Retained %	33.40	67.60	85.80					
Cumulative Passing %	66.60	32.40	14.20					

C-General gradient

sieve size(in)	3	1 1/2	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	96.1	79.1	69.6	59.9	48.6	31.3	20.8	10.1	4.4

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

Contractor

مشروع القطار السريع
القطاع السابع
معمل المركزى
(رقم 6)

Consultant

Mohamed elsaid

m.elsaid

17-9-2023

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

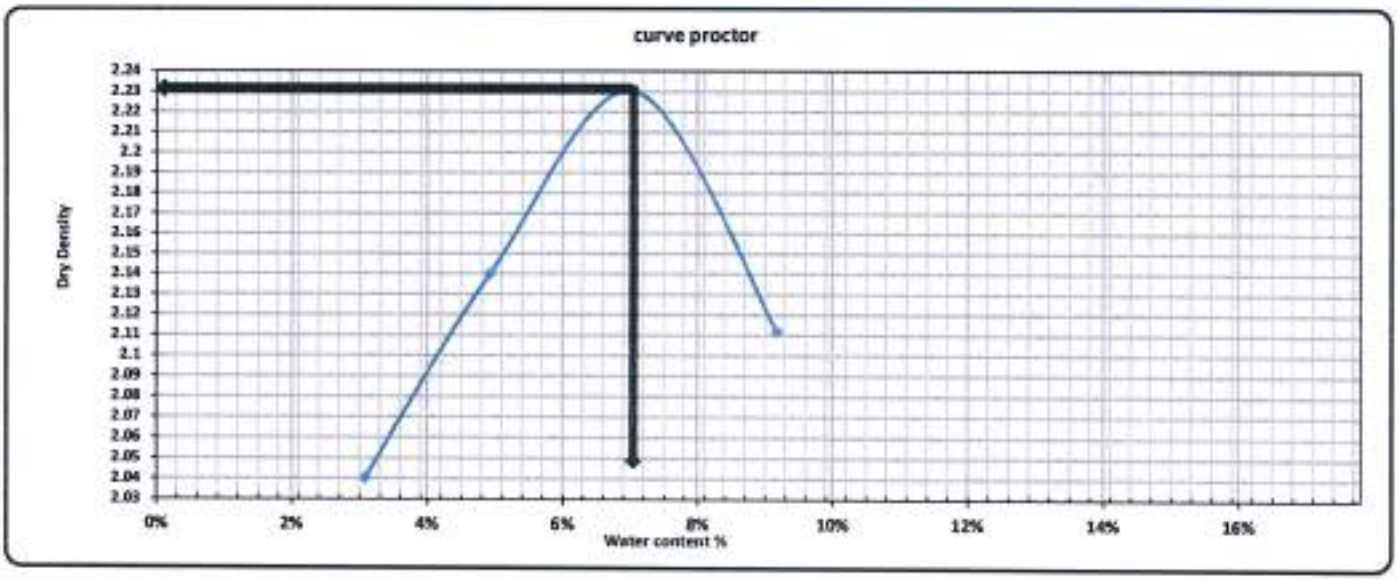
PROCTOR TEST

TESTING DATE	13/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GS-SB-9	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
	operate by	GOMAA BADR LAB			

Weight of empty mold :	6090.0	MAX Dry Density	2.230
Mold Volume:	2104.9	Water content %	7.30

trial no :	1	2	3	4		
Wt. Of Mold+ wet soil	10526.0	10825.0	11125.0	10952		
WT. WET SOIL	4436.0	4735.0	5035.0	4862.0		
Wt. Density	2.107	2.250	2.392	2.310		

Tare No.	5	5	11	11	8	8	2	2				
Tare wt.	26.2	26.2	27.1	27.1	22.7	22.7	25.4	25.4				
Wt. Of wet soil & tare	115.6	115.6	139.3	139.3	145.4	145.4	158.6	158.6				
Wt. Of dry soil & tare	112.78	112.78	133.8	133.8	137.05	137.05	147.2	147.2				
Wt. Of water	2.8	2.8	5.5	5.5	8.3	8.3	11.4	11.4				
Wt. Of dry soil	86.6	86.6	106.7	106.7	114.4	114.4	121.8	121.8				
Water content %	3.3%	3.3%	5.1%	5.1%	7.3%	7.3%	9.4%	9.4%				
AV.Water content %	3.3%		5.1%		7.3%		9.4%					
Dry Density	2.040		2.140		2.230		2.112					



Contractor

مشروع القطار السريع
القطاع السابع
معمل المركزى
(رقم 6)

Consultant

mohamed elsaid

17-9-2023

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

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

Absorbtion & Aggregate specific gravity AASHTO-T85

TESTING DATE:	14/9/2023	code	ZONE	562+000	565+000
LOCATION	K.P 563+000	GB-SB-9	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				

Weight of sample	2000.00	gm
Weight of saturated -dry surface sample (B)	2027.00	gm
Weight of saturated sample in water (C)	1238.00	gm
Weight of dry sample after heating (A)	1989.00	gm

Results:-

Bulk specific gravity = A / (B-C)	2.521	
Apparent specific gravity = A /(A-C)	2.648	
Asorbtion = (B-A)/A	1.911	%

Los Anglos abrasion AASHTO-T96

Results:-

Weight of sample before test (gm)	Weight of sample after test (gm)	Abrasion ratio (%)
5000	3796	24.08

Lab. Engineer
Name :
Sign :

مشروع القطار السريع
القطاع السابع
معمل المركزى
(رقم 6)

OPERATE BY
GOMAA BADR LAB

Consultant Engineer
Name : mohamed elsaid
Sign : m-elsaid
17-9-2023

Electric Express Train - HSR

California Bearing Ratio TEST

TESTING DATE	16/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-9	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
	operate by	GOMAA BADR LAB			

-: Test Results

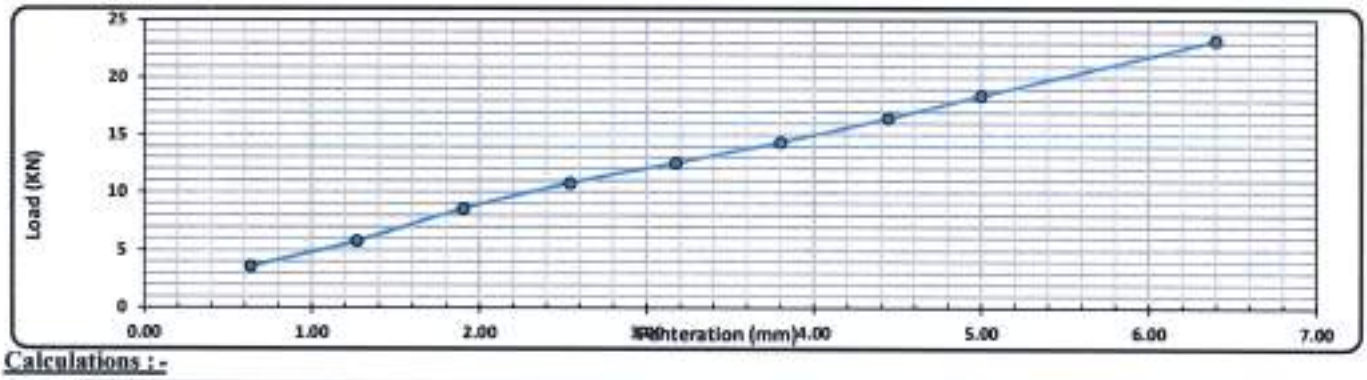
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm^3)	2177.4
Mold WT. (gm)	16444
Mold WT. + Wet WT. (gm)	21573
Wet WT. (gm)	5129
Wet Density (g/cm^3)	2.356
Dry Density (g/cm^3)	2.198
Practor Density (g/cm^3)	2.230
Compaction %	99

Mositure Ratio After Compacted Mold	
Tare No.	10
Tare WT. (gm)	24.59
Tare WT. +Wet WT. (gm)	184.43
Tare WT. +Dry WT. (gm)	173.74
2853	10.7
Dry WT. (gm)	149.2
Moisture Content %	7.2

Swelling	
Mold No.	1
Date	24H
Intial Height (mm)	0.00
Final Height (mm)	0.01
Difference	0
Sample Height (mm)	181.00
Swelling Ratio %	0%

Loading Reading :

penitration	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (kg)	362.00	586.00	870.00	1095.00	1274.00	1462.00	1678.00	1877.00	2368.00
Load (KN)	3.5	5.7	8.5	10.7	12.5	14.3	16.4	18.4	23.2



Calculations : -

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(lb)	(%)	(%)	(%)	% 100 عند نسبة
2.50	10.73	13.4	80.4%	99	100	81.6%
5.00	18.39	20.0	91.9%			93.2%

Lab. Specialist
Name :
Sign :

مشروع القطار السريع
القطاع السابع
معمل المركزى
(رقم 6)

Consultant Engineer
Name : mohamed elsaid
Sign : m-elsaid

17-9-2023

MATERIAL INSPECTION REQUEST

Contractor Company	**GOMAA BADER COMPANY**			Designer Company								
Contractor Refrence	**GB63-SB-10**											
Issued by Contractor	Name	Sign		Date 18/9/2023					Time			
	Eng/ AHMED FOUAD	Ahmed Fouad										
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM	
							18	9	2023			

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	SUBBALLAST				
Location to be Used	563+700 TO 563+900 (+0.9) 562+800 TO 563+000 (+0.9) 563+000 TO 563+200 (+0.9)				
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	2000	17/9/2023	
2	Atterberg Limits	M^3	2000	17/9/2023	
3	Proctor	M^3	2000	17/9/2023	
4	Los Anglos	M^3	2000	18/9/2023	
5	specific gravity	M^3	2000	18/9/2023	
6	CBR	M^3	2000	18/9/2023	

Comments by:	Comments by:
	نتائج الصلاحيات والمرفقات مطابقة لكميات حوالي 2000 م٣ مكعب

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG/ AHMED FOUAD	Ahmed Fouad		
QA/QC *	Youssef Rajab	Youssef		
GARB**				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST

الهيئة العامة للطرق و الكباري و النقل البري (GARBLT)

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

SYSTRA SHAKER

Contractor Company	**GOMAA BADER COMPANY**			Designer Company								
Contractor Refrence	**GB63-SB-10**											
Issued by Contractor	Name	Sign		Date 18/9/2023					Time			
	Eng/ AHMED FOUAD	Ahmed Fouad										
Received by ER			MAR	C1	C2	C3	DD	MM	YY	H H	MM	
							18	9	2023			

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	Sub Ballast			
Location to be Used	563 K.M			
Item	Spacification	Test Requirment	Test Result Attachment	Remark
1	ASTM D 75	Aggregate Sampling	According Spacification	
2	ASTM C 136	Sieve Analysis	According Spacification	
3	ASTM D 1440	Passing Sieve #200	3.8%	
4	ASTM D 4318	Atterberg Limit	N.P	
5	ASTM D 2974	Moisture content	7.3%	
6	ASTM D 1557	Modifid Proctor	2.224	
7	ASTM C 335	Los Anglos	23.96%	
8	ASTM D 6473	specific gravity	2.538	
9	ASTM D 1883	CBR	92.4%	
Comments by:		**Comments by:**		
		الصلاحيات والمرفقات مطابقة لكميات حوا لي 2000 م .تر مكعب نتائج		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG/ AHMED FOUAD	Ahmed Fouad		
QA/QC *	Youssef Ragab	Youssef		
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

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

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE	17/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-10	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				

1-visual inspection test — operate by — *Gomaa Bader Lab*

2-Gradient test

A-gradation of bulk materials — SAMPLE WEIGHT [g] — 20715.00 — gm

sieve size	3	1 1/2	1	3/4	1/2	3/8	# 4	PASS
Mass retained (g)	0.0	575.0	2920.0	2005.0	1710.0	1975.0	3740.0	
Cumulative Retained (g)	0.0	575.0	3495.0	5500.0	7210.0	9185.0	12925.0	
Cumulative Retained %	0.0	2.8	16.9	26.6	34.8	44.3	62.4	
Cumulative Passing %	100.0	97.2	83.1	73.4	65.2	55.7	37.6	

	table classify
	soil classify
	A-1-a
PRO	2.224
WC	7.3%
B.S.G	2.538%
LOS.	23.96%
CBR	92.4%

B-soft material gradation — WT.OF sample — 500.00 — gm

sieve size	10	40	200					
Cumulative Retained (g)	182.30	367.30	449.00					
Cumulative Retained %	36.46	73.46	89.80					
Cumulative Passing %	63.54	26.54	10.20					

C-General gradient

sieve size(in)	3	1 1/2	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	97.2	83.1	73.4	65.2	55.7	37.6	23.9	10.0	3.8

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

Contractor

مشروع القطار السريع
القطاع الساحلي
معمل المركزي
(رقم 6)

Consultant

Youssef Bayoumi

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

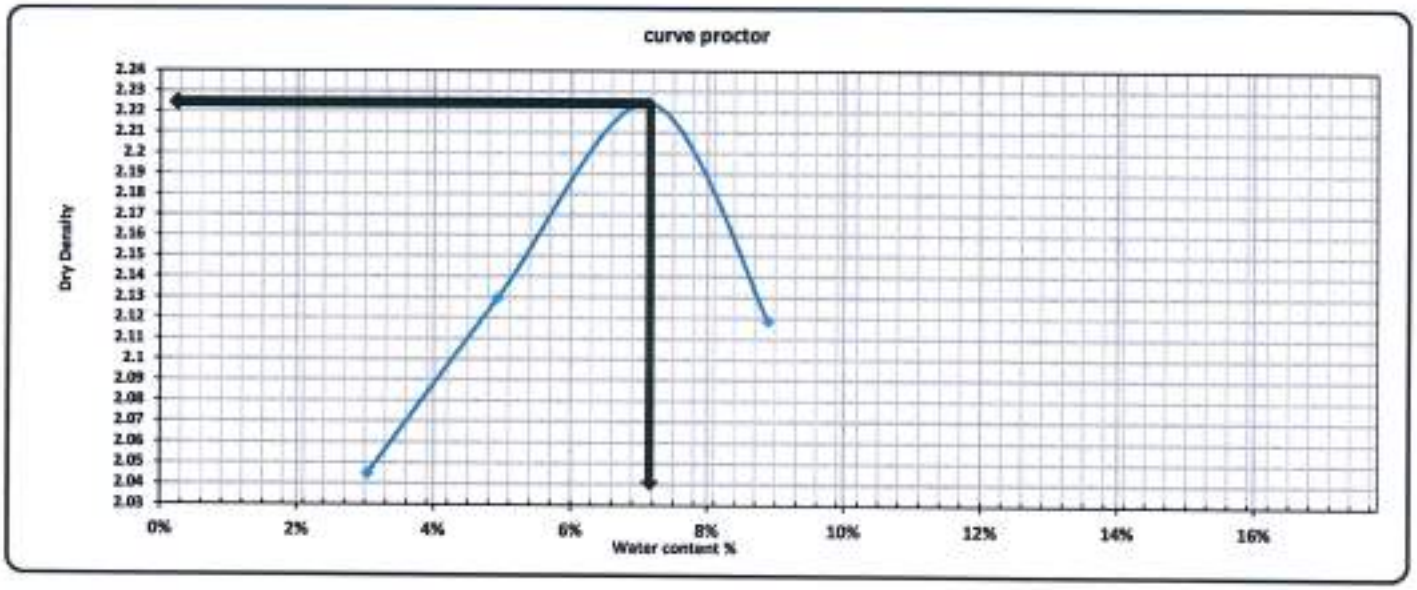
PROCTOR TEST

TESTING DATE	17/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-10	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
	operate by	GOMAA BADR LAB			

Weight of empty mold :	6090.0	MAX Dry Density	2.224
Mold Volume:	2104.9	Water content %	7.30

trial no :	1	2	3	4		
Wt. Of Mold+ wet soil	10533.0	10802.0	11115.0	10955		
WT. WET SOIL	4443.0	4712.0	5025.0	4865.0		
Wt. Density	2.111	2.239	2.387	2.311		

Tare No.	9	9	7	7	12	12	16	16				
Tare wt.	26.3	26.3	26.4	26.4	24.6	24.6	27.2	27.2				
Wt. Of wet soil & tare	123.3	123.3	136.3	136.3	141.2	141.2	166.3	166.3				
Wt. Of dry soil & tare	120.21	120.21	130.9	130.9	133.24	133.24	154.7	154.7				
Wt. Of water	3.0	3.0	5.4	5.4	8.0	8.0	11.6	11.6				
Wt. Of dry soil	93.9	93.9	104.5	104.5	108.7	108.7	127.4	127.4				
Water content %	3.2%	3.2%	5.1%	5.1%	7.3%	7.3%	9.1%	9.1%				
AV.Water content %	3.2%		5.1%		7.3%		9.1%					
Dry Density	2.045		2.129		2.224		2.119					



Contractor

مشروع القطار السريع
القطاع السابع
معمل المركزى
(رقم 6)

Consultant

Youssef Ragab
9-23

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 FOKA To MARSA MATROUH
From Station 504+000 To Station 568+177

Absorbtion & Aggregate specific gravity AASHTO-T85

TESTING DATE:	18/9/2023	code	ZONE	562+000	565+000
LOCATION	K.P 563+000	GB-SB-10	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				

Weight of sample	2000.00	gm
Weight of saturated -dry surface sample (B)	2025.00	gm
Weight of saturated sample in water (C)	1239.60	gm
Weight of dry sample after heating (A)	1993.00	gm

Results:-

Bulk specific gravity = A / (B-C)	2.538	
Apparent specific gravity = A /(A-C)	2.645	
Asorbtion = (B-A)/A	1.606	%

Los Anglos abrasion AASHTO-T96

Results:-

Weight of sample before test (gm)	Weight of sample after test (gm)	Abrasion ratio (%)
5000	3802	23.96

Lab. Engineer
Name :
Sign :

مشروع القطار السريع
معمل المركزى
(رقم 6)

OPERATE BY
GOMAA BADR LAB

Consultant Engineer
Name : Youssef Ragab
Sign :

Electric Express Train - HSR

California Bearing Ratio TEST

TESTING DATE	18/9/2023	code	ZONE	562+000	565+000
location	K.P 563+000	GB-SB-10	Material	Sub Ballast	
NAME COMPANY	Gomaa Bader				
	operate by	GOMAA BADR LAB			

-: Test Results

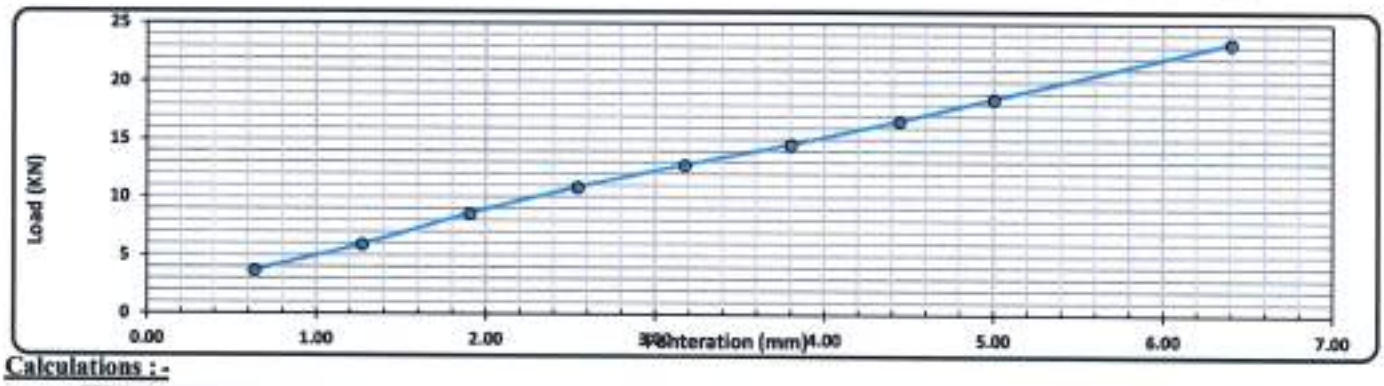
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm^3)	2177.4
Mold WT. (gm)	16444
Mold WT. + Wet WT. (gm)	21584
Wet WT. (gm)	5140
Wet Density (g/cm^3)	2.361
Dry Density (g/cm^3)	2.202
Proctor Density (g/cm^3)	2.224
Compaction %	99

Mositure Ratio After Compacted Mold	
Tare No.	11
Tare WT. (gm)	26.25
Tare WT. +Wet WT. (gm)	166.25
Tare WT. +Dry WT. (gm)	156.85
2853	9.4
Dry WT. (gm)	130.6
Moisture Content %	7.2

Swelling	
Mold No.	1
Date	24th
Intial Height (mm)	0.00
Final Height (mm)	0.01
Difference	0
Sample Height (mm)	181.00
Swelling Ratio %	0%

Loading Reading :

penetration	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (kg)	374.00	598.00	871.00	1102.00	1299.00	1485.00	1693.00	1889.00	2374.00
Load (KN)	3.7	5.9	8.5	10.8	12.7	14.6	16.6	18.5	23.3



Calculations : -

Penteration (mm)	Load (Kn)	Standard Load (lb)	CBR (%)	Mold - Compaction (%)	Compaction (%)	CBR % 100 عند نسبة
2.50	10.80	13.4	80.9%	99	100	81.7%
5.00	18.51	20.0	92.4%			93.4%

Lab Specialist

Name :

Sign :

مشروع القطار الكهربي
القطاع السابع
معمل
(رقم 6)

Consultant Engineer

Name : Youssef Refaat

Siga : Youssef 18-9-23