ZHR – 6 – 176

UNIVERSAL INSPECTION REQUEST

ENGINEERING CONSULTING OFFICE
المكتب الاستشاري الهندسي
د. خالد قنديل

SVSTRA SHAKER

RECEIPT of NOTIFICATION - Minimum Notice Period not less than 24

The Work described below will be complete and ready for inspection at planned time shown

Contractor Company	EL . ZHOOR . COMPANY			Designer Company*	KK CONSULT.							
Issued by Contractor	Name	Sign		Date	Time							
	Eng : Mahmoud Elkhlhwy			16 – 10 - 2023								
Received by Employers Representative	M.A	10/16/2023	UIR	C1	C2	C3	DD	MM	YY	HH	MM	
				K.P536	E W	C S	16	10	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		

EXPLANATION OF WORK TO BE INSPECTED

Description	Element	Item 8
Earth Works	Fill (FERMA)	From St (536+720) to (536+800)

INSPECTION DETAILS The Following will be ready at the Planned Inspection Time

Planned Inspection Date	Planned Inspection Time
16 . 10 . 2023	

COMPLIANCE EVIDENCE Must be Included as appropriate

Checklist Attached ☐	Test Results Attached ☐	Calibration Attached ☐	Other as indicated ☐
Drawing Reference	ITP Reference	MS Reference	

Civil	Survey	Material
Momen esmaeel Visual inspection is approved	Ahmed Adel levels are applied	Momen esmaeel Compaction test is approved 31/10/2023

INSPECTION RESULT

Organisation	Name	Sign	Date	Time	Approval Status A-AWC-R	Please Tick if Not Attend
Contractor	ENG : M. ELKHLAWY					
QA/QC*						
GARB**	ENG : KHALED FAWZY				A	
Employers Representative Notes						
Employers Representative Sign	M.A	10/30/2023			A	

* Designer

** Alignment: Bridges: Culvert

شيت تشغيل طبقات الردم لمشروع القطار السريع القطاع السابع (فوكه - مطروح)
شركة (الزهور)
من المحطة (536+720) إلي المحطة (536+800)

LAYER LEVEL	0

STATION	LEFT SIDE					PGL			RIGHT SIDE				
	ACT. WIDTH	13.44	10	5	S.E.%	DESIGN LEVEL	FERMA LEVEL	CL	S.E.%	5	9.94		ACT. WIDTH
536+720		59.93	60.07	60.27	-4%	61.37	60.47	60.47	-4%	60.27	60.07		
Act.													
Diff.		+1	✓	+2				+1		-3	+2	-1	
536+740		59.99	60.13	60.33	-4%	61.43	60.53	60.53	-4%	60.33	60.13		
Act.													
Diff.		-1	+1	+2				+2		✓	+3	-1	
536+760		60.05	60.19	60.39	-4%	61.49	60.59	60.59	-4%	60.39	60.19	60.59	
Act.													
Diff.		-1	✓	✓				+1		+1	✓	✓	
536+780		60.11	60.25	60.45	-4%	61.55	60.65	60.65	-4%	60.45	60.25	60.65	
Act.													
Diff.		-1	+2	+2				✓		+2	+1	-2	
536+800		60.17	60.31	60.51	-4%	61.61	60.71	60.71	-4%	60.51	60.31	60.71	
Act.													
Diff.		+2	+3	+1				✓		+1	+2	✓	

Amr Ashab
(Total Station)

MS FROM ST.(536+700) TO ST.(536+780)

Layer Zone	Layer No.	Station	536+700	536+720	536+740	536+760	536+780
		DESIGN LEVEL	61.31	61.37	61.43	61.49	61.55
		FERMA LEVEL	60.41	60.47	60.53	60.59	60.65
		CUT LEVEL	59.11	59.66	59.90	59.87	58.85
		DIFF (FERMA - CUT)	1.30	0.81	0.63	0.72	1.79
Middle Emp: Upper Empankemnt	1	0	60.41	60.47	60.53	60.59	60.65
	2	-0.25	60.16	60.22	60.28	60.34	60.40
	3	-0.5	59.91	59.97	60.03	60.09	60.15
	4	-0.75	59.66	59.72			59.90
	5	-1	59.41				59.65
	6	-1.25	59.16				59.40
	7	-1.5					59.15
	8	-1.75					58.90
	9	-2					
	10	-2.5					

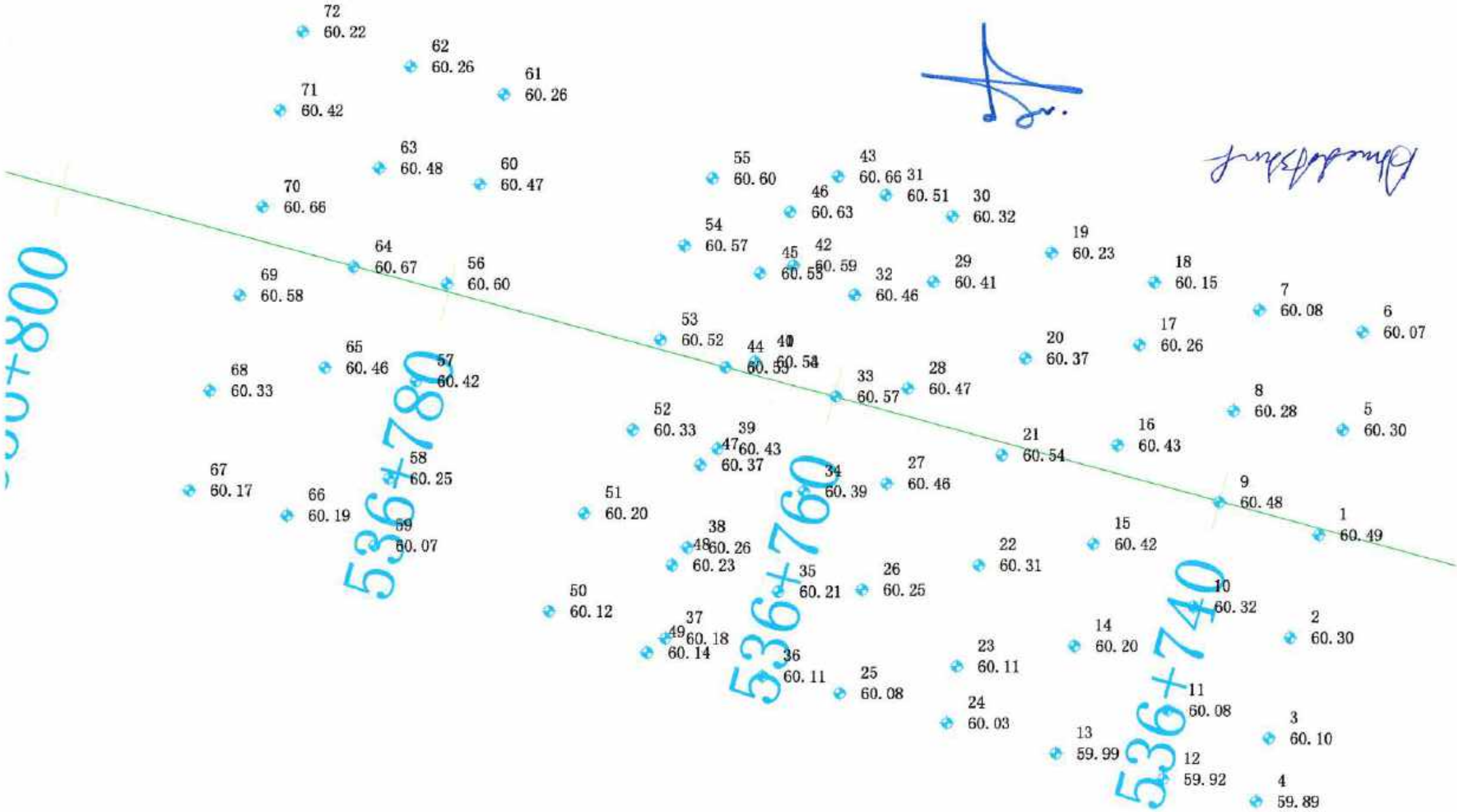
MS Approved
acc. to Design Profile
Rev-10

C.L DATA

Station	Easting	Northing
536+720.00	290300.9168	943924.3237
536+740.00	290281.612	943929.551
536+760.00	290262.3072	943934.7782
536+780.00	290243.0024	943940.0055
536+800.00	290223.6976	943945.2328

TYPICAL WIDTH

layer	slope	left	slop	right	TOTAL
0	-4.00%	13.44	-4.00%	9.94	23.38
-0.25	-4.00%	13.84	-4.00%	10.34	24.18
-0.5	-4.00%	14.24	-4.00%	10.74	24.98
-0.75	-4.00%	14.64	-4.00%	11.14	25.78
-1	-4.00%	15.04	-4.00%	11.54	26.58
-1.25	-4.00%	5	-4.00%	5	10
-1.5	0%	14.88	0%	11.59	26.47


536+800
536+780
536+760
536+740
72 60.22
62 60.26
61 60.26
71 60.42
63 60.48
60 60.47
70 60.66
64 60.67
56 60.60
69 60.58
65 60.46
57 60.42
68 60.33
67 60.17
66 60.19
58 60.25
59 60.07
55 60.60
43 60.66
31 60.51
30 60.32
46 60.63
54 60.57
45 60.55
42 60.59
32 60.46
29 60.41
19 60.23
18 60.15
7 60.08
6 60.07
17 60.26
20 60.37
53 60.52
44 60.55
40 60.54
33 60.57
28 60.47
8 60.28
5 60.30
52 60.33
39 60.43
47 60.37
16 60.43
21 60.54
34 60.39
27 60.46
9 60.48
1 60.49
51 60.20
38 60.26
48 60.23
15 60.42
22 60.31
35 60.21
26 60.25
10 60.32
50 60.12
37 60.18
49 60.14
14 60.20
2 60.30
23 60.11
36 60.11
25 60.08
11 60.08
24 60.03
3 60.10
13 59.99
12 59.92
4 59.89

POINT	NORTH	EAST	ELEV
1	943927.871	290286.569	60.494
2	943922.746	290285.151	60.296
3	943917.725	290284.096	60.096
4	943914.58	290283.463	59.887
5	943933.115	290287.744	60.304
6	943938	290288.693	60.072
7	943939.084	290283.552	60.081
8	943934.047	290282.285	60.28
9	943929.504	290281.583	60.476
10	943924.287	290280.311	60.324
11	943919.122	290279.04	60.083
12	943915.696	290278.812	59.923
13	943916.978	290273.458	59.991
14	943922.333	290274.375	60.196
15	943927.428	290275.315	60.421
16	943932.35	290276.496	60.434
17	943937.352	290277.573	60.262
18	943940.47	290278.3	60.148
19	943941.948	290273.163	60.234
20	943936.684	290271.876	60.367
21	943931.858	290270.712	60.537
22	943926.368	290269.569	60.311
23	943921.325	290268.48	60.114
24	943918.494	290267.987	60.031
25	943919.969	290262.63	60.085
26	943925.146	290263.737	60.25
27	943930.44	290264.948	60.456
28	943935.174	290265.988	60.47
29	943940.494	290267.253	60.414
30	943943.763	290268.183	60.322
31	943944.824	290264.866	60.51
32	943939.841	290263.32	60.464
33	943934.773	290262.4	60.566
34	943930.05	290260.806	60.391

POINT	NORTH	EAST	ELEV
35	943925.046	290259.542	60.207
36	943920.825	290258.765	60.108
37	943922.719	290253.89	60.183
38	943927.255	290255.001	60.261
39	943932.174	290256.49	60.428
40	943936.526	290258.358	60.533
41	943936.526	290258.349	60.537
42	943941.321	290260.251	60.586
43	943945.757	290262.48	60.655
44	943936.24	290256.882	60.527
45	943940.932	290258.586	60.554
46	943943.986	290260.077	60.626
47	943931.379	290255.639	60.372
48	943926.375	290254.224	60.226
49	943922.013	290252.987	60.135
50	943924.075	290248.082	60.116
51	943928.955	290249.837	60.198
52	943933.121	290252.251	60.332
53	943937.609	290253.609	60.523
54	943942.315	290254.803	60.571
55	943945.665	290256.207	60.596
56	943940.404	290242.915	60.598
57	943935.561	290241.386	60.425
58	943930.699	290240.038	60.249
59	943927.355	290239.332	60.07
60	943945.369	290244.56	60.473
61	943949.86	290245.762	60.255
62	943951.241	290241.08	60.259
63	943946.179	290239.52	60.476
64	943941.254	290238.258	60.669
65	943936.237	290236.826	60.455
66	943928.859	290234.947	60.191
67	943930.113	290230.058	60.171
68	943935.089	290231.078	60.33

POINT	NORTH	EAST	ELEV
69	943939.832	290232.559	60.576
70	943944.247	290233.698	60.663
71	943949.071	290234.565	60.42
72	943952.983	290235.676	60.215

MATERIAL INSPECTION REQUEST

Contractor Company	El . Zhoor . Company			Designer Company		KK CONSULT.				
Issued by Contractor	Name	Sign		Date		COD				
	Eng \ Mahmoud elkhlawy			12-4-2023		ZH 21				
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM
							12	4	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	Fill material results				
Location to be Used	fill (0) 536+680 536+560 FLAT (-1.5) 536+800 536+780 FLAT (-1) 536+700 536+680 FILL (-1.25) 536+800 536+780 FILL (-0.75) 536+700 536+680 FILL (-1) 536+800 536+780		FILL (-0.5) 536+720 536+680 FILL (-0.75) 536+800 536+780 FILL (-0.25) 536+720 536+680 FILL (-0.5) 536+800 536+780 FILL (-0.25) 536+800 536+780 FILL (0) 536+720 536+680 FILL (0) 536+800 536+720		
MAR Approval No				Date	
Supplier Name					
Test Requirement		Specification		Clause	
Reference Photos	Yes attached / No	Other			

Item	Description	Unit	Quantity	Arrival Date	Note
1	L.L & P.L & O.M.C %	m3	5000	9 – 4 - 2023	
2	Proctor	m3	5000	9 – 4 - 2023	
3	Classification	m3	5000	9 – 4 - 2023	
4	Seive analysis	m3	5000	9 – 4 - 2023	

Comments by:	Comments by:
Asample has been taken form fill material by KK office to (mansor ali hasan) lab and the results founded meet the specificontions and accepted	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mahmoud elkhlawy			
QA/QC *	Mohamed Ali			
GARB**				
Comment by ER				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST

Contractor Company	EL ZHOOR COMPANY				Designer Company	KK						
Issued by Contractor	Name	Sign			Date	cod						
	ENG : MAHMOUD ELKHLAWY				12 – 4 – 2023	Zh 21						
Received by ER			MAR	C1	C2	C3	DD	MM	YY	HH	MM	
							12	4	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	Soil classify (A 1 a)			
Location to be Used	536+000 to 537+000			
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	8.3 %	
4	ASTM D 4318	Atterberg Limit	NOn	
5	ASTM D 2974	Moisture Content	6.5 %	
6	ASTM D 1557	Modifid Proctor	2.156	
7	ASTM D 1883	C B R	48.20%	

Comments by:	Comments by:

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	MAHMOUD ELKHLAWY			
QA/QC *	Mohamed Ali			
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

[illegible]

[illegible]

[illegible]

[illegible]

Consulting lab	[illegible] Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	9/4/2023		
LOCATION:	K.P 536+000	Zone	536+000 to 537+000
NAME COMPANY:	Elsahar		

[illegible] inspection test

[illegible] test

[illegible] of bulk materials				SAMPLE WEIGHT (g)		25101.00		gm		Visible classify
sieve size	2	1.5	1	3/4	1/2	3/8	# 4	PASS		soil classify
0.00	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			A-1-a
Cumulative Retained (g)				[illegible]	[illegible]	11029.0	[illegible]		MDD	2.156
Cumulative Retained %				15.8	32.7	43.9	69.0		WC	0.30
Cumulative Passing %									CBR	46.20

[illegible] material gradation				WT. OF sample		200.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	88.00	226.00	272.00					
Cumulative Retained %								
Cumulative Passing %								

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 %										

ATTERBERG LIMITS	LIQUID LIMIT (L.L)	[illegible]	PLASTIC INDEX (P.I)
	NL	NP	NP

Contractor

Consultant

operating Lab	[illegible] Lab

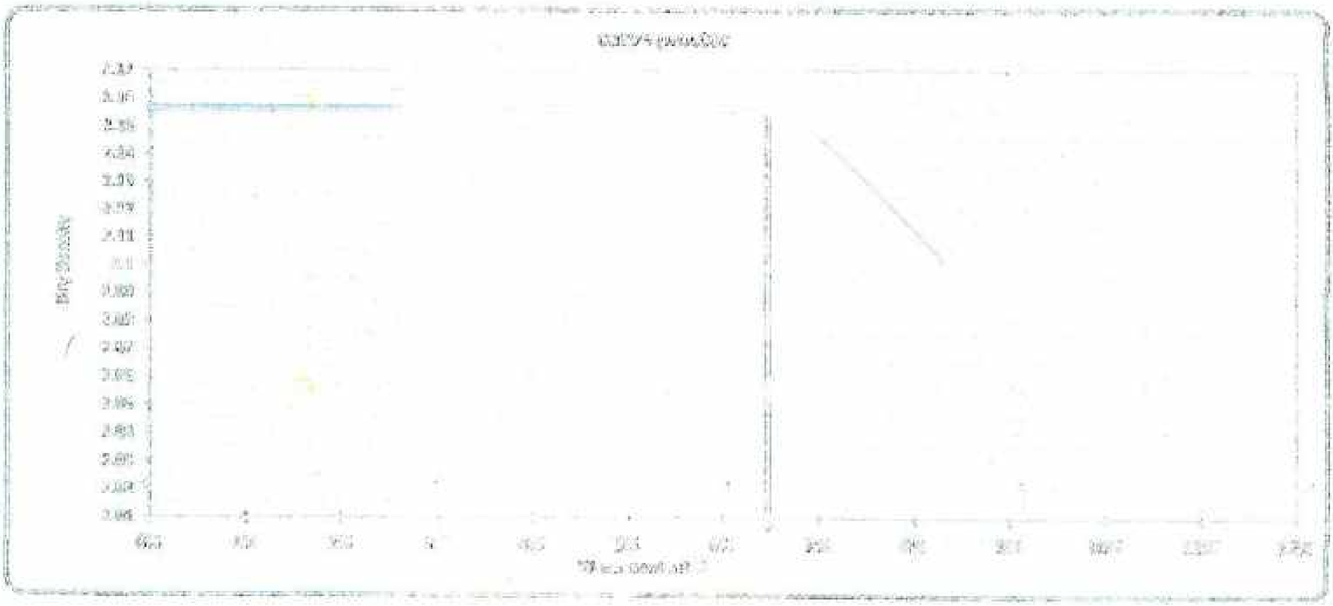
Proctor Test

TESTING DATE:	[illegible]	[illegible]	[illegible]
LOCATION	[illegible]		
NAME COMPANY	[illegible]		

Weight of empty mold :	[illegible]	M.S. Dry Density	2.1[illegible]
Mold Volume	21[illegible]	Water content %	[illegible]

trial no :	1	2	3	4	
Wt. Of Mold + wet soil	10[illegible]	10[illegible]	[illegible]	10[illegible]	
WT. WET SOIL	[illegible]	[illegible]	[illegible]	[illegible]	
Wt. Density	2.0[illegible]	2.23[illegible]	2.[illegible]	2.2[illegible]	

Tare No.	1	2	3	4	5	6	7	8		
Tare wt.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Wt. Of wet soil & tare	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Wt. Of dry soil & tare	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Wt. Of water	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Wt. Of dry soil	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Water content %	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
AV. Water content %	[illegible]		[illegible]		[illegible]		[illegible]			
Dry Density	[illegible]		2.1[illegible]		[illegible]		[illegible]			



Contractor	Consultant

KK

California Bearing Ratio (CBR)

[illegible]	[illegible]	[illegible]	Zone	[illegible]	[illegible]
[illegible]	[illegible]				
[illegible]	[illegible]				

Test Results

Compaction % for Mould	
Mould No.	1
Mould Vol. (cm^3)	[illegible]
Mould Wt. (gm)	[illegible]
Mould Wt. + Wet Wt. (gm)	[illegible]
Wet Wt. (gm)	[illegible]
Wet Density (gm/cm^3)	[illegible]
Dry Density (gm/cm^3)	[illegible]
Proctor Density (gm/cm^3)	[illegible]
Compaction %	[illegible]

Moisture Content After Compacted Mould	
Tin No.	[illegible]
Tare Wt. (gm)	[illegible]
Tare Wt. + Wet Wt. (gm)	[illegible]
Tare Wt. + Dry Wt. (gm)	[illegible]
Water Wt. (gm)	[illegible]
Dry Wt. (gm)	[illegible]
Moisture content %	[illegible]

Swelling	
Mould No.	1
Days	[illegible]
Initial Reading (mm)	[illegible]
Final Reading (mm)	[illegible]
Difference	[illegible]
Sample Height (mm)	[illegible]
Swelling Ratio %	[illegible]

Loading Readings :

Penetration (mm)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Load Reading (kN)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Load (kN)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Calculations :-

Penetration	Load	Standard Load	CBR	CBR Corrected	Compaction	CBR
(mm)	(kN)	(kN)	(%)	(%)	(%)	[illegible]
2.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.00	[illegible]	[illegible]	[illegible]			[illegible]

Lab Engineer

Name :

Sign :

Consultant Engineer

Name : Mohammed Ali

Sign :

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

ACTIVITY : Sand cone test	**laboratory results**	**COD**	**Z H (21)**

Company :	EL-ZHOUR COMPANY	**Layer level :**	**fill (0)**
Description:	**Compaction tast**	**Layer Thickness :**	**0.25 m**
Station represented :	**536+720 TO 536+800**	**Sample Date :**	**17/10/2023**

Modified Proctor Testing Results

Max. Dry Density . gm/cm3	Optimum Moisture Content . %	Degree of Compaction Required . %	Bulk Density of Specified Sand . gm/cm3
2.15	6.5	95%	1.48

Compaction Testing Results & Calculations

STATION	536+745	536+770	536+795							
Hole No.	1	2	3							
WT, of Sand befor Test ,gm	9724	9534	9674							
WT, of Sand After Test ,gm	5567	5466	5543							
WT, of Sand in Cone + hole ,gm	4157	4068	4131							
WT, of Sand in Cone	1140	1140	1140							
WT, of Sand at hole ,gm	3017	2928	2991							
Volume of the hole, Cm3	2039	1978	2021							
WT, of Soil from Hole ,gm	4482	4389	4459							
Bulk Density of Soil, Gm/cm3	2.199	2.218	2.206							
Moisture Content , %	6.3	6	5.7							
Dry Density, gm/cm3	2.068	2.093	2.087							
Compaction, (%)	96.2%	97.3%	97.1%							

Acceptance Criteria	**Comply**		**Not Comply**		

CONSULTANT COMMENTS	

Site engineer :-	**Consultant Materials Engineer :-**
Name :- Mahmoud El Khlawy	**Name :-** momen esmaeel
Signature :-	**Signature :-** 17/10/2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

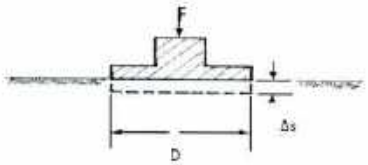
Company Name	El Zohour		
Location	536+720	To	536+800
Taste Date	18-10-2023		
Layer level (m)	0		

Station	536+740

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	14.43	12.90		0.000	0.000		0.000
1.000	2.4	0.707	0.01	14.16	12.65		0.270	0.250		0.260
2.000	18.8	5.652	0.08	13.87	12.36		0.560	0.540		0.550
0.080	37.7	11.304	0.16	13.70	12.00		0.730	0.900		0.815
4.000	58.9	17.663	0.25	13.58	11.78		0.850	1.120		0.985
5.000	77.7	23.315	0.33	13.39	11.67		1.040	1.230		1.135
6.000	98.9	29.673	0.42	13.21	11.59		1.220	1.310		1.265
7.000	117.8	35.325	0.50	13.09	11.47		1.340	1.430		1.385
8.000	58.9	17.663	0.25	13.15	11.52		1.280	1.380		1.330
9.000	29.4	8.831	0.12	13.25	11.61		1.180	1.290		1.235
9.000	2.4	0.707	0.01	13.50	11.80		0.930	1.100		1.015
10.000	2.4	0.707	0.01	13.50	11.80		0.930	1.100		1.015
11.000	18.8	5.652	0.08	13.45	11.74		0.980	1.160		1.070
12.000	37.7	11.304	0.16	13.34	11.65		1.090	1.250		1.170
13.000	58.9	17.663	0.25	13.26	11.56		1.170	1.340		1.255
14.000	77.7	23.315	0.33	13.22	11.47		1.210	1.430		1.320
15.000	98.9	29.673	0.42	13.16	11.40		1.270	1.500		1.385

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.

		s	ΔS	Δσ
0.7 σ_1	0.35	1.16	0.37812	0.2
0.3 σ_1	0.15	0.78188		
0.7σ_2	0.35	1.33444	0.20944	0.2
0.3σ_2	0.15	1.12501		
D (mm)	300			
Ev_1	119.01			
Ev_2	214.86			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.81

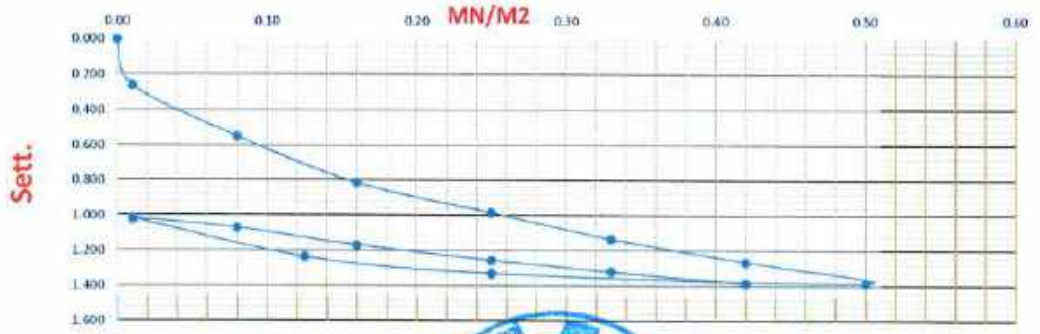
$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m



Contractor Engineer	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Youssef Rafaat
Sign :	Sign :	Sign : Youssef 18-2-23

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

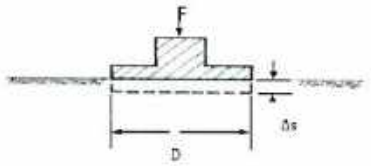
Company Name	El Zohour		
Location	536+720	To	536+800
Taste Date	18-10-2023		
Layer level (m)	0		

Station	536+780

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	15.51	14.70		0.000	0.000		0.000
1.000	2.4	0.707	0.01	15.34	14.55		0.170	0.150		0.160
2.000	18.8	5.652	0.08	15.20	14.40		0.310	0.300		0.305
0.080	37.7	11.304	0.16	15.05	14.24		0.460	0.460		0.460
4.000	58.9	17.663	0.25	14.90	14.12		0.610	0.580		0.595
5.000	77.7	23.315	0.33	14.75	13.95		0.760	0.750		0.755
6.000	98.9	29.673	0.42	14.61	13.80		0.900	0.900		0.900
7.000	117.8	35.325	0.50	14.41	13.64		1.100	1.060		1.080
8.000	58.9	17.663	0.25	14.45	13.71		1.060	0.990		1.025
9.000	29.4	8.831	0.12	14.60	13.79		0.910	0.910		0.910
9.000	2.4	0.707	0.01	14.88	13.98		0.630	0.720		0.675
10.000	2.4	0.707	0.01	14.88	13.98		0.630	0.720		0.675
11.000	18.8	5.652	0.08	14.80	13.89		0.710	0.810		0.760
12.000	37.7	11.304	0.16	14.73	13.80		0.780	0.900		0.840
13.000	58.9	17.663	0.25	14.65	13.73		0.860	0.970		0.915
14.000	77.7	23.315	0.33	14.56	13.68		0.950	1.020		0.985
15.000	98.9	29.673	0.42	14.50	13.60		1.010	1.100		1.055

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.

		s	ΔS	Δσ
0.7 σ_1	0.35	0.7425	0.30188	0.2
0.3 σ_1	0.15	0.44062		
0.7σ_2	0.35	1.00056	0.15555	0.2
0.3σ_2	0.15	0.84501		
D (mm)	300			
Ev_1	149.07			
Ev_2	289.30			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.94

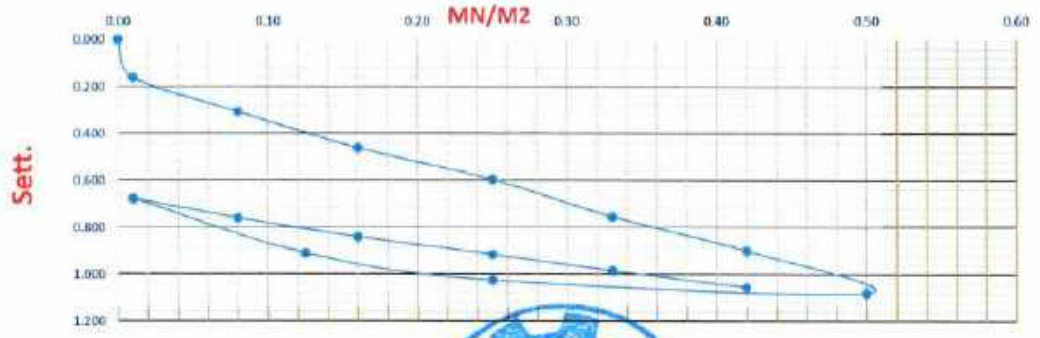
$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m



Contractor Engineer	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Youssef Ruga
Sign :	Sign :	Sign : Youssef 18/10/2023

ZHR - 6 - 175

UNIVERSAL INSPECTION REQUEST

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

KUSTRA C SHAKER

الهيئة العامة للطرق والكباري

RECEIPT of NOTIFICATION - Minimum Notice Period not less than 24
The Work described below will be complete and ready for inspection at planned time shown

Contractor Company	EL . ZHOOR . COMPANY		Designer Company*	KK CONSULT.
Issued by Contractor	Name: Eng : Mahmoud Elkhlhwy	Sign	Date: 15 – 10 - 2023	Time
Received by Employers Representative	M.A	10/15/2023 UIR		

C1	C2	C3	DD	MM	YY	HH	MM
K.P536	E W	C S	15	10	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		

EXPLANATION OF WORK TO BE INSPECTED

Description	Element	Item
Earth Works	Fill (0)	From St (536+680) to (536+720)

INSPECTION DETAILS The Following will be ready at the Planned Inspection Time

Planned Inspection Date	Planned Inspection Time
15.10.2023	

COMPLIANCE EVIDENCE Must be Included as appropriate

Checklist Attached ☐	Test Results Attached☐	Calibration Attached☐	Other as indicated☐
Drawing Reference	ITP Reference	MS Reference	

Civil	Survey	Material
Momen esmaeel visual inspection is approved	Ahmed Ashraf Jacks Are Approved	Momen esmaeel Compaction test is approved 16/10/2023

INSPECTION RESULT					Approval Status	Please Tick if Not Attend
Organisation	Name	Sign	Date	Time	A-AWC-R	
Contractor	ENG : M. ELKHLAWY					
QA/QC*						
GARB**	ENG : KHALED FAWZY				A	
Employers Representative Notes						
Employers Representative Sign	M.A	10/30/2023			A	

* Designer
** Alignment: Bridges: Culvert

شيت تشغيل طبقات الردم لمشروع القطار السريع القطاع السابع (فوكه - مطروح)
شركة (الزهور)
من المحطة (536+680) إلي المحطة (536+720)

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

LAYER LEVEL	0

STATION	LEFT SIDE					PGL			RIGHT SIDE			
	ACT. WIDTH	13.44	10	5	S.E.%	DESIGN LEVEL	FERMA LEVEL	CL	S.E.%	5	9.94	ACT. WIDTH
536+680		59.81	59.95	60.15			60.35	60.35		60.15	59.95	
Act.		-٢	+٢	-١	-4%	61.25		-١	-4%	+١	-١	
Diff.												
536+700		59.87	60.01	60.21			60.41	60.41		60.21	60.01	
Act.		-١	+١	+١	-4%	61.31		+١	-4%	-١	+١	
Diff.												
536+720		59.93	60.07	60.27			60.47	60.47		60.27	60.07	
Act.		+١		-١	-4%	61.37		-١	-4%	+١	-١	
Diff.												

Total Stations 17

MS FROM ST.(536+700) TO ST.(536+780)

Layer Zone	Layer No.	Station	536+700	536+720	536+740	536+760	536+780
		DESIGN LEVEL	61.31	61.37	61.43	61.49	61.55
		FERMA LEVEL	60.41	60.47	60.53	60.59	60.65
		CUT LEVEL	59.11	59.66	59.90	59.87	58.85
		DIFF (FERMA - CUT)	1.30	0.81	0.63	0.72	1.79
Middle Emp: Upper Empankemnt	1	0	60.41	60.47	60.53	60.59	60.65
	2	-0.25	60.16	60.22	60.28	60.34	60.40
	3	-0.5	59.91	59.97	60.03	60.09	60.15
	4	-0.75	59.66	59.72			59.90
	5	-1	59.41				59.65
	6	-1.25	59.16				59.40
	7	-1.5					59.15
	8	-1.75					58.90
	9	-2					
	10	-2.5					

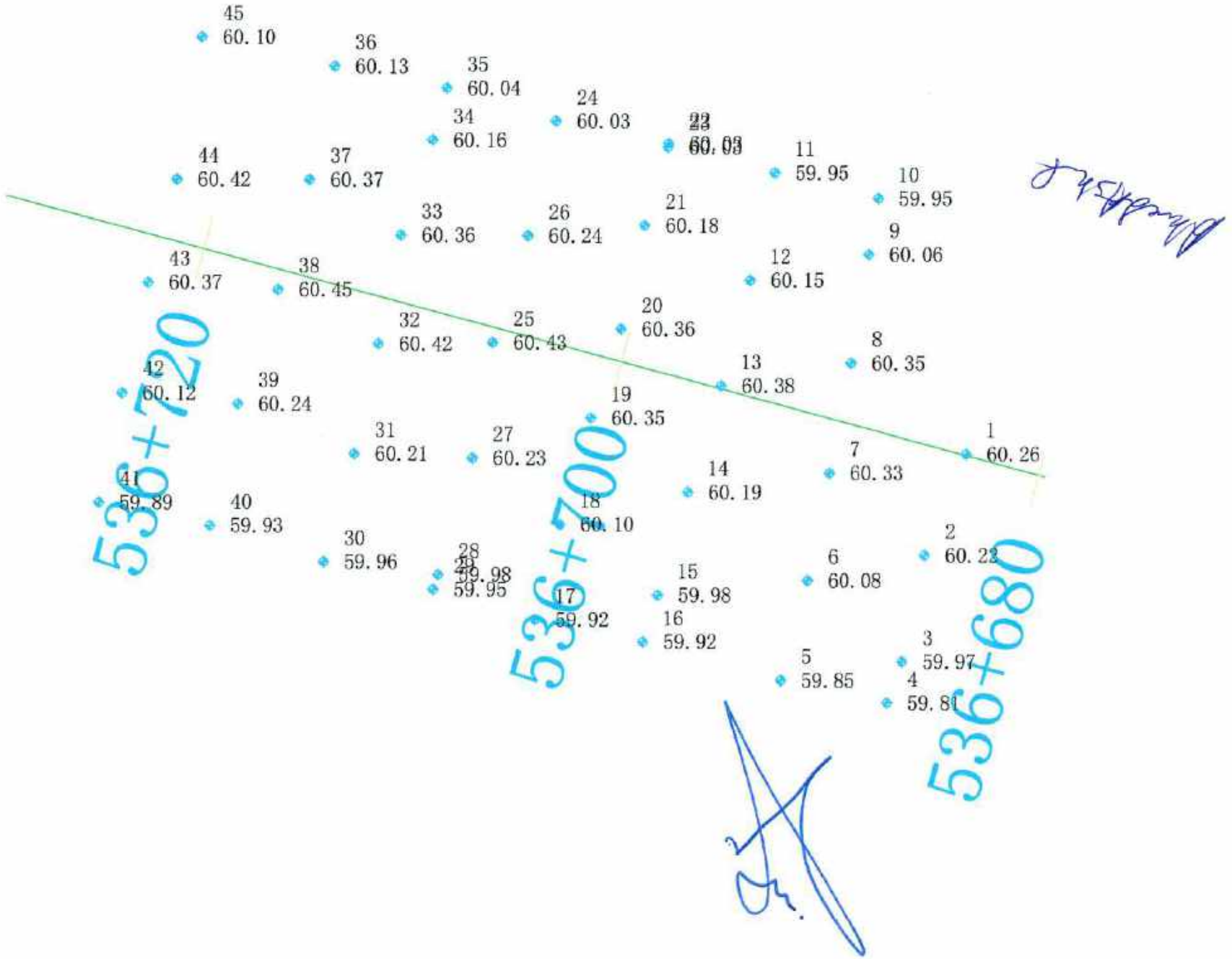
MS Approved acc. to Design Table Rev-10

C.L DATA

Station	Easting	Northing
536+680	290339.5264	943913.8692
536+700	290320.2216	943919.0965
536+720	290300.9168	943924.3237

TYPICAL WIDTH

layer	slope	left	slop	right	TOTAL
0	-4.00%	13.44	-4.00%	9.94	23.38
-0.25	-4.00%	13.84	-4.00%	10.34	24.18
-0.5	-4.00%	14.24	-4.00%	10.74	24.98
-0.75	-4.00%	5	-4.00%	5	10.00
-1	0.00%	14.13	0.00%	10.84	24.98


45
60.10
36
60.13
35
60.04
24
60.03
34
60.16
44
60.42
37
60.37
11
59.95
10
59.95
33
60.36
26
60.24
21
60.18
9
60.06
43
60.37
38
60.45
12
60.15
32
60.42
25
60.43
20
60.36
8
60.35
42
60.12
39
60.24
13
60.38
19
60.35
31
60.21
27
60.23
1
60.26
7
60.33
41
59.89
40
59.93
14
60.19
18
60.10
30
59.96
28
59.98
59.95
15
59.98
6
60.08
2
60.23
17
59.92
16
59.92
3
59.97
5
59.85
4
59.80
536+720
536+700
536+680

POINT	NORTH	EAST	ELEV
1	943914.84	290336.141	60.258
2	943910.182	290334.241	60.222
3	943905.275	290333.21	59.969
4	943903.384	290332.519	59.809
5	943904.416	290327.61	59.853
6	943909.023	290328.837	60.082
7	943913.973	290329.838	60.329
8	943919.021	290330.831	60.35
9	943924.036	290331.625	60.056
10	943926.622	290332.067	59.947
11	943927.807	290327.269	59.947
12	943922.853	290326.138	60.149
13	943917.983	290324.812	60.385
14	943913.1	290323.291	60.193
15	943908.348	290321.903	59.985
16	943906.193	290321.226	59.923
17	943907.226	290316.25	59.922
18	943911.612	290317.39	60.1
19	943916.507	290318.804	60.351
20	943920.604	290320.178	60.356
21	943925.383	290321.262	60.176
22	943929.154	290322.35	60.027
23	943928.989	290322.333	60.031
24	943930.194	290317.167	60.031
25	943919.987	290314.267	60.432
26	943924.91	290315.875	60.244
27	943914.677	290313.341	60.231
28	943909.304	290311.766	59.978

POINT	NORTH	EAST	ELEV
29	943908.626	290311.547	59.949
30	943909.901	290306.487	59.964
31	943914.88	290307.885	60.209
32	943919.934	290308.998	60.415
33	943924.945	290310.021	60.357
34	943929.325	290311.471	60.165
35	943931.731	290312.125	60.045
36	943932.742	290306.945	60.132
37	943927.507	290305.798	60.367
38	943922.447	290304.35	60.454
39	943917.177	290302.501	60.243
40	943911.581	290301.209	59.932
41	943912.66	290296.089	59.892
42	943917.691	290297.145	60.124
43	943922.789	290298.327	60.37
44	943927.531	290299.65	60.419
45	943934.09	290300.791	60.103

MATERIAL INSPECTION REQUEST

Contractor Company	El . Zhoor . Company			Designer Company	KK CONSULT.					
Issued by Contractor	Name	Sign		Date	COD					
	Eng \ Mahmoud elkhlawy			12-4-2023	ZH 21					
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM
							12	4	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	Fill material results				
Location to be Used	fill (0)	536+680 536+560	FILL (-0.5)	536+720 536+680	
	FLAT (-1.5)	536+800 536+780	FILL (-0.75)	536+800 536+780	
	FLAT (-1)	536+700 536+680	FILL (-0.25)	536+720 536+680	
	FILL (-1.25)	536+800 536+780	FILL (-0.5)	536+800 536+780	
	FILL (-0.75)	536+700 536+680	FILL (-0.25)	536+800 536+780	
	FILL (-1)	536+800 536+780	FILL (0)	536+720 536+680	
			FILL (0)	536+800 536+720	
MAR Approval No			Date		
Supplier Name					
Test Requirement		Specification	Clause		
Reference Photos	Yes attached / No	Other			

Item	Description	Unit	Quantity	Arrival Date	Note
1	L.L & P.L & O.M.C %	m3	5000	9 – 4 - 2023	
2	Proctor	m3	5000	9 – 4 - 2023	
3	Classification	m3	5000	9 – 4 - 2023	
4	Seive analysis	m3	5000	9 – 4 - 2023	

Comments by:	Comments by:
Asample has been taken form fill material by KK office to (mansor ali hasan) lab and the results founded meet the specificontions and accepted	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mahmoud elkhlawy			
QA/QC *	Mohamed Ali			
GARB**				
Comment by ER				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST

Contractor Company	EL ZHOOR COMPANY					Designer Company	KK						
Issued by Contractor	Name	Sign				Date	cod						
	ENG : MAHMOUD ELKHLAWY					12 – 4 – 2023	Zh 21						
Received by ER			MAR	C1	C2	C3	DD	MM	YY	HH	MM		
							12	4	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	Soil classify (A 1 a)			
Location to be Used	536+000 to 537+000			
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	8.3 %	
4	ASTM D 4318	Atterberg Limit	NOn	
5	ASTM D 2974	Moisture Content	6.5 %	
6	ASTM D 1557	Modifid Proctor	2.156	
7	ASTM D 1883	C B R	48.20%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	MAHMOUD ELKHLAWY			
QA/QC *	Mohamed Ali			
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

Operating lab | Mansour Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	9/1/2023		Zone	536+000 to 537+000
LOCATION	K.P 536+500			
NAME COMPANY	Elsaher			

...oil inspection test

...sient test

...adation of bulk materials				SAMPLE WEIGHT (g)		25161.00		gm		table classify
sieve size	2	1.5	1	3/4	1/2	3/8	#4	PASS		soil classify
6.00	0.0	1436.0	[illegible]	3771.0	3261.0	2732.0	5601.0			A-1-b
...ulative Retained (g)				4831.0	8092.0	11030.0	17907.0		MDD	2.156
...ulative Retained %				19.6	32.7	43.8	65.0		W/C	6.30
...ulative Passing %									CBR	48.20

...e material gradation				WT. OF sample		500.00		gm
sieve size	10	40	200					
...ulative Retained (g)	68.00	226.00	372.00					
...ulative Retained %								
...ulative Passing %								

...eneral gradation

sieve size(in)	2	1.5	1	3/4	1/2	3/8	3/4	# 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
...ulative Passing %										

ATTERBERG LIMITS	LIQUID LIMIT (L.L.)	[illegible]	PLASTIC INDEX (P.I.)
	NL	NP	NP

Contractor

Consultant

MI

KK	[illegible]	[illegible]
Operating Lab	Mansour Lab	

Proctor Test

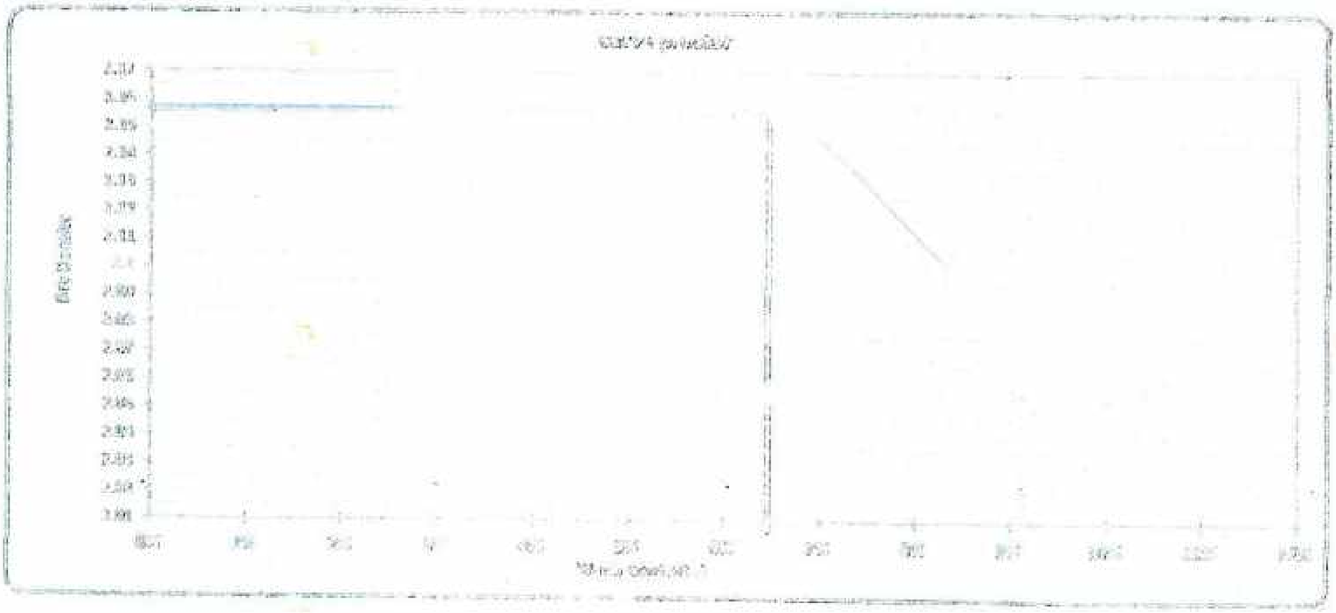
TESTING DATE:	[illegible]		Zone	[illegible]
LOCATION:	[illegible]			
NAME COMPANY	[illegible]			

Weight of empty mold :	[illegible]
Mold Volume:	2133.6

Max Dry Density	[illegible]
Water content %	6.5

Trial no :	1	2	3	4	
Wt. of Mold+ wet soil	[illegible]	[illegible]	[illegible]	[illegible]	
WT. WET SOIL	[illegible]	[illegible]	[illegible]	[illegible]	
Wt. Density	2.0[illegible]	[illegible]	[illegible]	2.2[illegible]	

Tare No.	1	2	3	4	5	6	7	8		
Tare wt.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Wt. Of wet soil & tare	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0		
Wt. Of dry soil & tare	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	196	[illegible]	[illegible]		
Wt. Of water	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.2	[illegible]		
Wt. Of dry soil	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Water content %	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
AV. Water content %	3.2%		[illegible]		[illegible]		[illegible]			
Dry Density	[illegible]		2.1[illegible]		[illegible]		[illegible]			



Contractor	Consultant

California Bearing Ratio (CBR) Test

Station No.	[illegible]				
Location	[illegible]	[illegible]	Zone	[illegible]	[illegible]
Name of Company	[illegible]				

Test Results

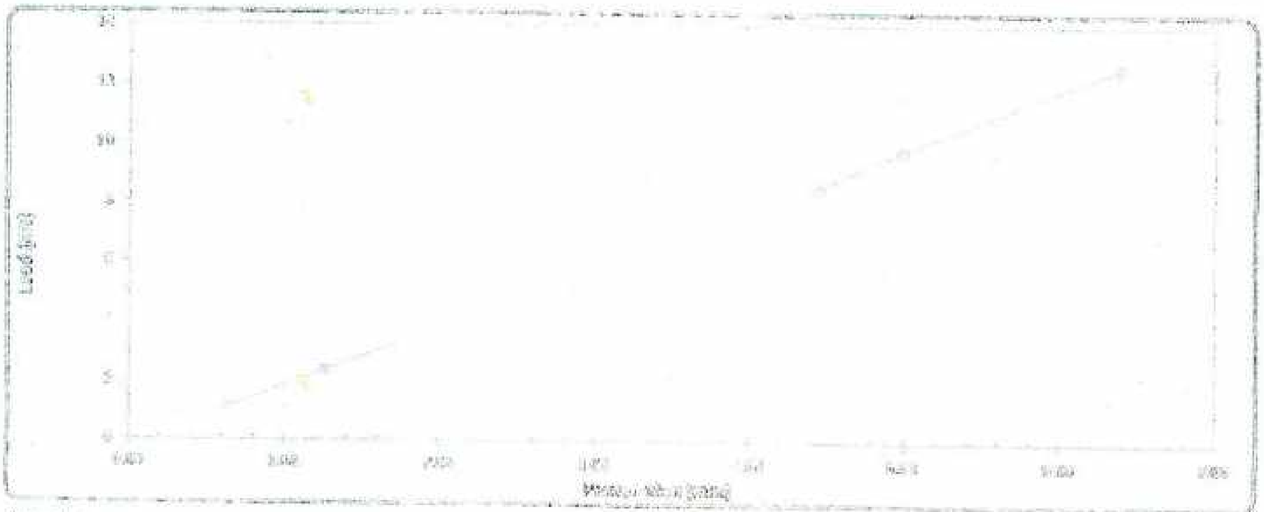
Compaction % for Mold	
Mold No.	[illegible]
Mold Vol. (cm³)	[illegible]
Mold Wt. (gm)	[illegible]
Mold Wt. + Wet Wt. (gm)	[illegible]
Wet Wt. (gm)	[illegible]
Wet Density (gm/cm³)	[illegible]
Dry Density (gm/cm³)	[illegible]
Proctor Density (gm/cm³)	[illegible]
Compaction %	[illegible]

Moisture Content	
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Moisture Content %	[illegible]

Swelling	
Mold No.	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Swelling Ratio %	[illegible]

Loading Readings :

Penetration (mm)	[illegible]	1.27	[illegible]	2.54	[illegible]	[illegible]	[illegible]	5.08	[illegible]
Load Reading (kN)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Load (kN)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



Calculations :

Penetration	Load	Standard Load	CBR	Field Compaction	Compaction	CBR
(mm)	(kN)	(kN)	(%)	(%)	(%)	[illegible]
2.54	[illegible]	13.3	[illegible]	[illegible]	[illegible]	[illegible]
5.08	[illegible]	20.0	[illegible]			[illegible]

Lab. Testing

Name :

Sign :

Consultant Engineer

Name : Mohammed Ali

Sign :

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

ACTIVITY : Sand cone test	**laboratory results**	**COD**	**Z H (21)**

Company :	EL-ZHOUR COMPANY	**Layer level :**	**fill (0)**
Description:	**Compaction tast**	**Layer Thickness :**	**0.25 m**
Station represented :	**536+680 TO 536+720**	**Sample Date :**	**16/10/2023**

Modified Proctor Testing Results

Max. Dry Density . gm/cm3	Optimum Moisture Content . %	Degree of Compaction Required . %	Bulk Density of Specified Sand . gm/cm3
2.15	6.5	95%	1.48

Compaction Testing Results & Calculations

STATION	536+705	536+720								
Hole No.	1	2								
WT. of Sand befor Test ,gm	9538	9681								
WT. of Sand After Test ,gm	5460	5576								
WT. of Sand in Cone + hole ,gm	4078	4105								
WT. of Sand in Cone	1140	1140								
WT. of Sand at hole ,gm	2938	2965								
Volume of the hole, Cm3	1985	2003								
WT. of Soil from Hole ,gm	4405	4427								
Bulk Density of Soil, Gm/cm3	2.219	2.210								
Moisture Content , %	5.7	6.2								
Dry Density, gm/cm3	2.099	2.081								
Compaction, (%)	97.6%	96.8%								

Acceptance Criteria	Comply		Not Comply		

CONSULTANT COMMENTS

Site engineer :-

Name :- Mahmoud El Khlawy

Signature :-

Consultant Materials Engineer :-

Name :- momen esmaeel

Signature :- 16/10/2023

Owner Consultant | Contractor Consultant | Contaretor | Owner

Plate Load Test Results

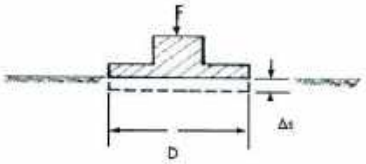
Company Name	El Zohour		
Location	536+680	To	536+720
Taste Date	18-10-2023		
Layer level (m)	0		

Station	536+700

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	18.55	17.99		0.000	0.000		0.000
1.000	2.4	0.707	0.01	18.31	17.80		0.240	0.190		0.215
2.000	18.8	5.652	0.08	18.05	17.55		0.500	0.440		0.470
0.080	37.7	11.304	0.16	17.75	17.36		0.800	0.630		0.715
4.000	58.9	17.663	0.25	17.56	17.21		0.990	0.780		0.885
5.000	77.7	23.315	0.33	17.32	17.08		1.230	0.910		1.070
6.000	98.9	29.673	0.42	17.10	16.94		1.450	1.050		1.250
7.000	117.8	35.325	0.50	16.85	16.75		1.700	1.240		1.470
8.000	58.9	17.663	0.25	16.92	16.80		1.630	1.190		1.410
9.000	29.4	8.831	0.12	17.05	16.88		1.500	1.110		1.305
9.000	2.4	0.707	0.01	17.35	17.15		1.200	0.840		1.020
10.000	2.4	0.707	0.01	17.35	17.15		1.200	0.840		1.020
11.000	18.8	5.652	0.08	17.25	17.07		1.300	0.920		1.110
12.000	37.7	11.304	0.16	17.13	16.98		1.420	1.010		1.215
13.000	58.9	17.663	0.25	17.05	16.90		1.500	1.090		1.295
14.000	77.7	23.315	0.33	16.94	16.82		1.610	1.170		1.390
15.000	98.9	29.673	0.42	16.80	16.76		1.750	1.230		1.490

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.

		s	ΔS	Δσ
0.7 σ_1	0.35	1.0575	0.37312	0.2
0.3 σ_1	0.15	0.68438		
0.7σ_2	0.35	1.41222	0.21221	0.2
0.3σ_2	0.15	1.20001		
D (mm)	300			
Ev_1	120.60			
Ev_2	212.05			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.76

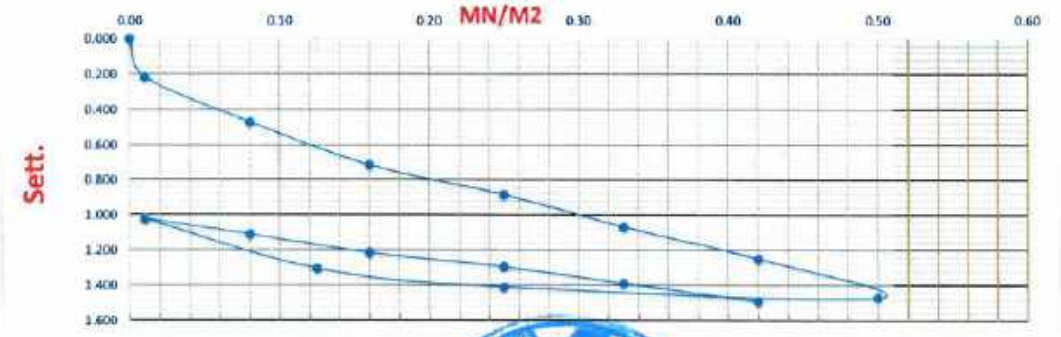
$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m



Contractor Engineer	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Youssef Raafat
Sign :	Sign :	Sign :

ZHR-6-174

UNIVERSAL INSPECTION REQUEST

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

SYSTRA SHAKER

الهيئة العامة للطرق والكباري

RECEIPT of NOTIFICATION - Minimum Notice Period not less than 24 The Work described below will be complete and ready for inspection at planned time shown											
Contractor Company	**EL . ZHOOR . COMPANY**			Designer Company*		KK CONSULT.					
Issued by Contractor	Name	Sign		Date		Time					
	Eng : Mahmoud Elkhlhwy			11 – 10 - 2023							
Received by Employers Representative	M.A	10/11/2023	UIR	C1	C2	C3	DD	MM	YY	HH	MM
				K.P536	E W	C S	11	10	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		

EXPLANATION OF WORK TO BE INSPECTED		
Description	**Element**	**Item**
Earth Works	**Fill (-0.25)**	**From St (536+780) to (536+800)**

INSPECTION DETAILS The Following will be ready at the Planned Inspection Time	
Planned Inspection Date	Planned Inspection Time
11.10.2023	

COMPLIANCE EVIDENCE Must be Included as appropriate			
Checklist Attached ☐	**Test Results Attached ☐**	**Calibration Attached ☐**	**Other as indicated ☐**
Drawing Reference	ITP Reference	MS Reference	

Civil	Survey	Material
momen esmaeel visual inspection is approved	Ahmed Abbas tests are approved	momen esmaeel Compaction test is approved 12/10/2023

INSPECTION RESULT					**Approval Status**	**Please Tick if Not Attend**
Organisation	**Name**	**Sign**	**Date**	**Time**	**A-AWC-R**	
Contractor	ENG : M. ELKHLAWY	Mahmoud				
QA/QC*						
GARB**	ENG : KHALED FAWZY				A	
Employers Representative Notes						
Employers Representative Sign	M.A	10/30/2023			A	

* Designer

** Alignment: Bridges: Culvert

شيت تشغيل طبقات الردم لمشروع القطار السريع القطاع السابع (فوكه - مطروح)
شركة (الزهور)
من المحطة (536+780) إلي المحطة (536+800)

2,84 +
59,60
62,44

						LAYER LEVEL		-0.25						
STATION	LEFT SIDE					PGL			RIGHT SIDE					
	ACT. WIDTH	13.84	10	5	S.E.%	DESIGN LEVEL	FERMA LEVEL	CL	S.E.%	5	10.34		ACT. WIDTH	
536+780		59.84	60.00	60.20			60.65	60.40		60.20	59.98			
Act.					-4%	61.55		2,04	-4%					
Diff.		+1	-2	+1				+2		-1	+1			
536+800		59.90	60.06	60.26			60.71	60.46		60.26	60.04			
Act.					-4%	61.61			-4%					
Diff.		+2	+1	✓				+1		+1	-1			

MS FROM ST.(536+700) TO ST.(536+780)

Layer Zone	Layer No.	Station	536+700	536+720	536+740	536+760	536+780
		DESIGN LEVEL	61.31	61.37	61.43	61.49	61.55
		FERMA LEVEL	60.41	60.47	60.53	60.59	60.65
		CUT LEVEL	59.11	59.66	59.90	59.87	58.85
		DIFF (FERMA - CUT)	1.30	0.81	0.63	0.72	1.79
Middle Emp: Upper Empankemnt	1	0	60.41	60.47	60.53	60.59	60.65
	2	-0.25	60.16	60.22	60.28	60.34	60.40
	3	-0.5	59.91	59.97	60.03	60.09	60.15
	4	-0.75	59.66	59.72			59.90
	5	-1	59.41				59.65
	6	-1.25	59.16				59.40
	7	-1.5					59.15
	8	-1.75					58.90
	9	-2					
	10	-2.5					

MS Approved
w.r.t. Design Table
Rev-10

C.L DATA

Station	Easting	Northing
536+780.00	290243.0024	943940.0055
536+800.00	290223.6976	943945.2328

TYPICAL WIDTH

layer	slope	left	slop	right	TOTAL
0	-4.00%	13.44	-4.00%	9.94	23.38
-0.25	-4.00%	13.84	-4.00%	10.34	24.18
-0.5	-4.00%	14.24	-4.00%	10.74	24.98
-0.75	-4.00%	14.64	-4.00%	11.14	25.78
-1	-4.00%	15.04	-4.00%	11.54	26.58
-1.25	-4.00%	5	-4.00%	5	10
-1.5	0%	14.88	0%	11.59	26.47

MATERIAL INSPECTION REQUEST

Contractor Company	El . Zhoor . Company			Designer Company			KK CONSULT.					
Issued by Contractor	Name	Sign		Date			COD					
	Eng \ Mahmoud elkhlawy			12-4-2023			ZH 21					
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM	
							12	4	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	Fill material results				
Location to be Used	fill (0)	536+680 536+560	FILL (-0.5)	536+720 536+680	
	FLAT (-1.5)	536+800 536+780	FILL (-0.75)	536+800 536+780	
	FLAT (-1)	536+700 536+680	FILL (-0.25)	536+720 536+680	
	FILL (-1.25)	536+800 536+780	FILL (-0.5)	536+800 536+780	
	FILL (-0.75)	536+700 536+680	FILL (-0.25)	536+800 536+780	
	FILL (-1)	536+800 536+780	FILL (0)	536+720 536+680	
			FILL (0)	536+800 536+720	
MAR Approval No			Date		
Supplier Name					
Test Requirement		Specification	Clause		
Reference Photos	Yes attached / No	Other			

Item	Description	Unit	Quantity	Arrival Date	Note
1	L.L & P.L & O.M.C %	m3	5000	9 – 4 - 2023	
2	Proctor	m3	5000	9 – 4 - 2023	
3	Classification	m3	5000	9 – 4 - 2023	
4	Seive analysis	m3	5000	9 – 4 - 2023	

Comments by:	Comments by:
Asample has been taken form fill material by KK office to (mansor ali hasan) lab and the results founded meet the specificontions and accepted	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mahmoud elkhlawy			
QA/QC *	Mohamed Ali			
GARB**				
Comment by ER				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST

Contractor Company	EL ZHOOR COMPANY			Designer Company	KK								
Issued by Contractor	Name	Sign		Date	cod								
	ENG : MAHMOUD ELKHLAWY			12 – 4 – 2023	Zh 21								
Received by ER			MAR	C1	C2	C3	DD	MM	YY	HH	MM		
							12	4	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	Soil classify (A 1 a)			
Location to be Used	536+000 to 537+000			
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	8.3 %	
4	ASTM D 4318	Atterberg Limit	NOn	
5	ASTM D 2974	Moisture Content	6.5 %	
6	ASTM D 1557	Modifid Proctor	2.156	
7	ASTM D 1883	C B R	48.20%	
Comments by:			Comments by:	

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	MAHMOUD ELKHLAWY			
QA/QC *	Mohamed Ali			
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

Operating lab	[illegible] Lab

PARTICLE SIZE [illegible] OF SOIL

TESTING DATE:	[illegible]/2023	[illegible]	[illegible] to [illegible]
LOCATION	K.P [illegible]		
NAME COMPANY	[illegible]		

[illegible] inspection test

[illegible]

[illegible] of bulk materials				SAMPLE WEIGHT (g)		[illegible]		gm		table classify
sieve size	2	1.5	1	3/4	1/2	3/8	# 4	PASS		soil classify
0.00	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			A-1-[illegible]
Cumulative Retained (g)				[illegible]	[illegible]	[illegible]	[illegible]		PRD	2.1[illegible]
Cumulative Retained %				[illegible]	[illegible]	[illegible]	[illegible]		M.C	[illegible]
Cumulative Passing %									CBR	[illegible]

[illegible] material gradation				[illegible] sample		[illegible]		gm
sieve size	10	40	200					
Cumulative Retained (g)	[illegible]	[illegible]	[illegible]					
Cumulative Retained %								
Cumulative Passing %								

General gradation

sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.8	37.5	25.0	[illegible]	[illegible]	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %										

ATTERBERG LIMITS	LIQUID LIMIT (L.L.)	[illegible]	PLASTIC INDEX (P.I.)
	NL	[illegible]	NP

Contractor	Consultant

KK

operating Lab | Mansour Lab

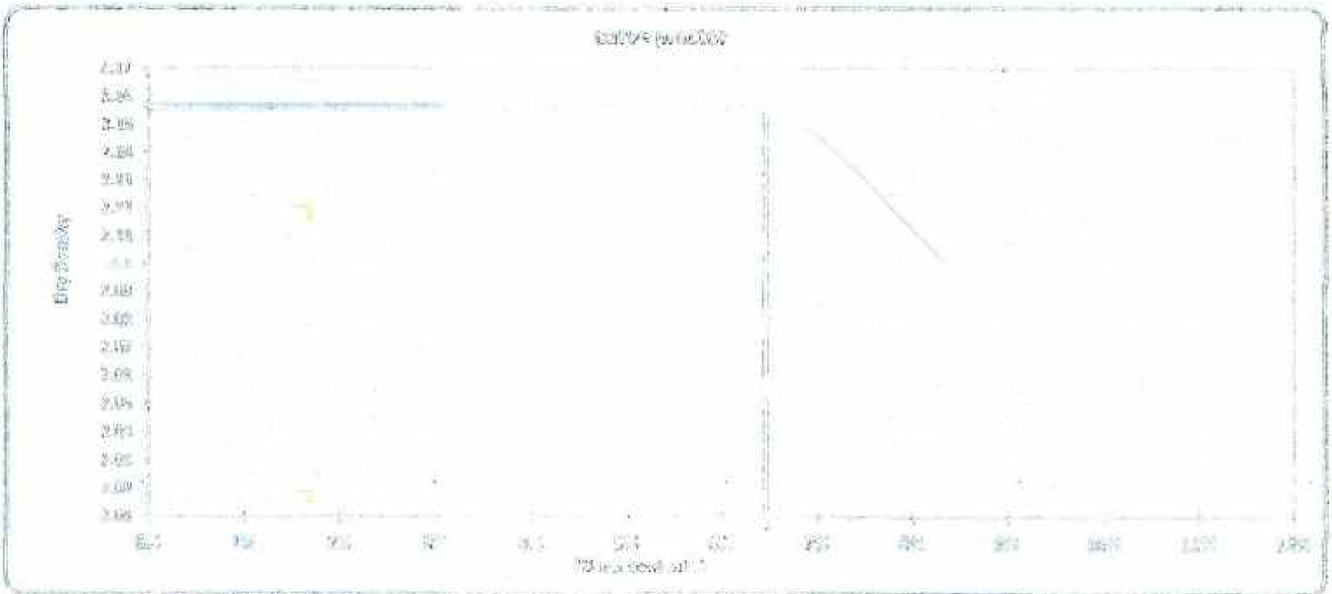
Proctor Test

TESTING DATE:	[illegible] 2023	
LOCATION:	K.P 330+600	
NAME COMPANY:	Elbaher	
Case	[illegible]	

Weight of empty mould :	12500		MAX Dry Density	2.156
Mold Volume	2130.0		Water content %	6.5

mod no :	1	2	3	4	
Wt. of Mold + soil	16[illegible]	[illegible]	[illegible]	[illegible]	
W.T. WET SOIL	[illegible]	[illegible]	[illegible]	[illegible]	
Wt. Density	2.095	2.231	2.296	2.277	

Tare No.	1	2	3	4	5	6	7	8		
Tare wt.	58.18	[illegible]	58.60	58.42	[illegible]	58.90	58.78	57.90		
Wt. Of wet soil & tare	200.0	[illegible]	200.0	200.0	200.0	200.0	200.0	200.0		
Wt. Of dry soil & tare	195.5	[illegible]	[illegible]	[illegible]	[illegible]	191	[illegible]	[illegible]		
Wt. Of water	4.5	[illegible]	7.0	7.5	[illegible]	8.7	11.3	10.7		
Wt. Of dry soil	137.7	[illegible]	137.2	[illegible]	132.3	132.5	130.0	131.4		
Water content %	3.2%	3.2%	5.1%	5.2%	6.5%	6.5%	8.6%	8.2%		
AV. Water content %	3.2%		5.2%		6.5%		8.2%			
Dry Density	2.029		2.120		2.156		2.160			



Contractor

Consultant

[illegible]

California Bearing Ratio (CBR)

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]				
[illegible]	[illegible]				

Test Results:

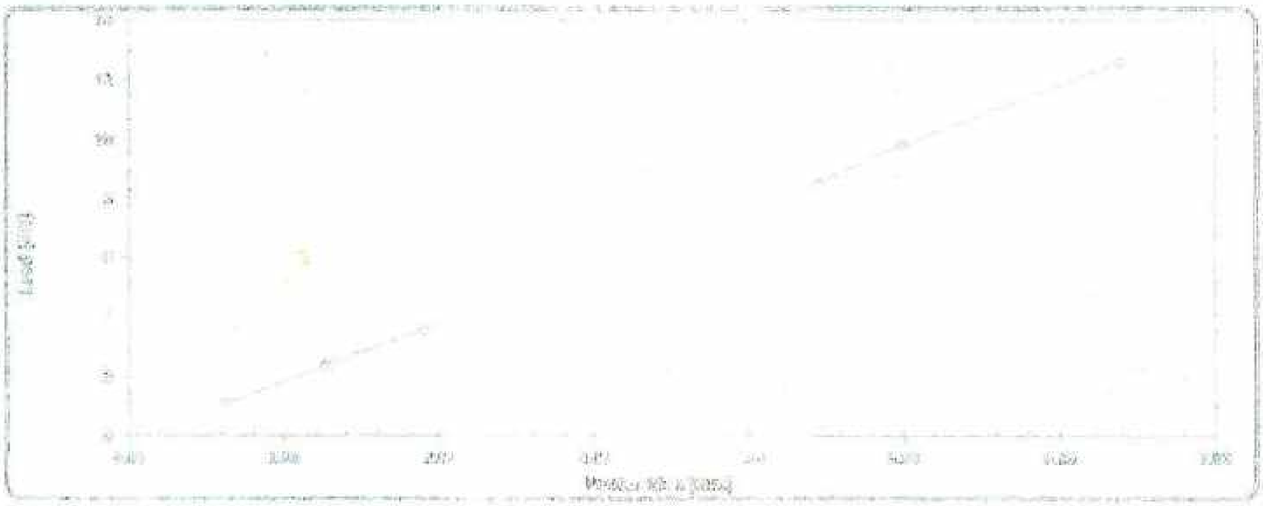
Compaction % for Mold	
Mold No.	1
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Wet Density (g/cm³)	[illegible]
Dry Density (g/cm³)	[illegible]
[illegible] Density (g/cm³)	[illegible]
Compaction %	[illegible]

Moisture Content [illegible]	
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Swelling	
Mold No.	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Swelling [illegible] %	[illegible]

Loading Results:

Penetration (mm)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Load Reading (Kn)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Load (KN)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



Calculations:

Penetration	Load	[illegible]	[illegible]	[illegible]	[illegible]	CBR
(mm)	(Kn)	[illegible]	[illegible]	[illegible]	(%)	[illegible]
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]				[illegible]

[illegible]

Name: [illegible]

Sign:

[illegible]

Name: Mohammed Ali

Sign: MI

Electric Express Train - HSR

From El Ain El Sokhna City To El Alamein

Section -7 From FokaTo MARSA MATROUH

From Station 504+000 To Station 568+177

ACTIVITY : Sand cone test	laboratory results	COD	Z H (21)

Company :	EL-ZHOUR COMPANY	Layer level :	fill (-0.25)
Description:	Compaction tast	Layer Thickness :	0.25 m
Station represented :	536+780 TO 536+800	Sample Date :	12/10/2023

Modified Proctor Testing Results

Max. Dry Density , gm/cm3	Optimum Moisture Content , %	Degree of Compaction Required , %	Bulk Density of Specified Sand , gm/cm3
2.15	6.5	95%	1.48

Compaction Testing Results & Calculations

STATION	536+800									
Hole No.	1									
WT, of Sand befor Test ,gm	9426									
WT, of Sand After Test ,gm	5376									
WT, of Sand in Cone + hole ,gm	4050									
WT, of Sand in Cone	1140									
WT, of Sand at hole ,gm	2910									
Volume of the hole, Cm3	1966									
WT, of Soil from Hole ,gm	4382									
Bulk Density of Soil, Gm/cm3	2.229									
Moisture Content , %	6.1									
Dry Density, gm/cm3	2.101									
Compection, (%)	97.7%									

Acceptance Criteria	Comply		Not Comply				

CONSULTANT COMMENTS	

Site engineer :-

Name :- Mahmoud El Khlawy

Signature :-

Consultant Materials Engineer :-

Name :- momen esmaeel

Signature :- 12/10/2023

ZHR-6-173

UNIVERSAL INSPECTION REQUEST

ENGINEERING CONSULTING OFFICE
المكتب الاستشاري الهندسي

القطار الكهربائي السريع
Electric Express Train

SYSTRA SHAKER

الهيئة العامة للطرق والكباري

RECEIPT of NOTIFICATION - Minimum Notice Period not less than 24 The Work described below will be complete and ready for inspection at planned time shown												
Contractor Company	EL . ZHOOR . COMPANY			Designer Company*				KK CONSULT.				
Issued by Contractor	Name Eng : Mahmoud Elkhlhwy	Sign mohamed		Date 10 – 10 - 2023				Time 10:12				
Received by Employers Representative	M.A	10/10/2023	UIR	C1 K.P536	C2 E W	C3 C S	DD 10	MM 10	YY 2023	HH 10	MM 12	

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		

EXPLANATION OF WORK TO BE INSPECTED		
Description	Element	Item
Earth Works	Fill (-0.5)	From St (536+780) to (536+800)

INSPECTION DETAILS The Following will be ready at the Planned Inspection Time	
Planned Inspection Date	Planned Inspection Time
10.10.2023	12:01

COMPLIANCE EVIDENCE Must be Included as appropriate			
Checklist Attached ☐	Test Results Attached☐	Calibration Attached☐	Other as indicated☐
Drawing Reference	ITP Reference		MS Reference

Civil	Survey	Material
momen esmaeel visual inspection is approved	Ahmed Ashraf levels Are approved	momen esmaeel Compaction test is approved 11/10/2023

INSPECTION RESULT					Approval Status	Please Tick if Not Attend
Organisation	Name	Sign	Date	Time	A-AWC-R	
Contractor	ENG : M . ELKHLAWY	mohamed				
QA/QC*						
GARB**	ENG : KHALED FAWZY	[signature]			A	
Employers Representative Notes						
Employers Representative Sign	M.A	30/10/2023			A	

* Designer

** Alignment: Bridges: Culvert

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

شيت تشغيل طبقات الردم لمشروع القطار السريع القطاع السابع (فوكه - مطروح)
شركة (الزهور)
من المحطة (536+780) إلي المحطة (536+800)

LAYER LEVEL	-0.5

STATION	LEFT SIDE					PGL			RIGHT SIDE				
	ACT. WIDTH	14.24	10	5	S.E.%	DESIGN LEVEL	FERMA LEVEL	CL	S.E.%	5	10.74		ACT. WIDTH
536+780		59.58	59.75	59.95			60.65	60.15		59.95	59.72		
Act.					-4%	61.55			-4%				
Diff.		-2	+1	-1				✓		+1	-1	+2	
536+800		59.64	59.81	60.01			60.71	60.21		60.01	59.78		
Act.					-4%	61.61			-4%				
Diff.		+2	-1	+2				+1		-1	+2	-1	

Ahmed Adel
(Total station)

م/ احمد جبريل

MS FROM ST.(536+700) TO ST.(536+780)

Layer Zone	Layer No.	Station	536+700	536+720	536+740	536+760	536+780
		DESIGN LEVEL	61.31	61.37	61.43	61.49	61.55
		FERMA LEVEL	60.41	60.47	60.53	60.59	60.65
		CUT LEVEL	59.11	59.66	59.90	59.87	58.85
		DIFF (FERMA - CUT)	1.30	0.81	0.63	0.72	1.79
Middle Emp: Upper Empankemnt	1	0	60.41	60.47	60.53	60.59	60.65
	2	-0.25	60.16	60.22	60.28	60.34	60.40
	3	-0.5	59.91	59.97	60.03	60.09	60.15
	4	-0.75	59.66	59.72			59.90
	5	-1	59.41				59.65
	6	-1.25	59.16				59.40
	7	-1.5					59.15
	8	-1.75					58.90
	9	-2					
	10	-2.5					

MS Approved
acc. to Design Table
Rev-10

C.L DATA

Station	Easting	Northing
536+780.00	290243.0024	943940.0055
536+800.00	290223.6976	943945.2328

TYPICAL WIDTH

layer	slope	left	slop	right	TOTAL
0	-4.00%	13.44	-4.00%	9.94	23.38
-0.25	-4.00%	13.84	-4.00%	10.34	24.18
-0.5	-4.00%	14.24	-4.00%	10.74	24.98
-0.75	-4.00%	14.64	-4.00%	11.14	25.78
-1	-4.00%	15.04	-4.00%	11.54	26.58
-1.25	-4.00%	5	-4.00%	5	10
-1.5	0%	14.88	0%	11.59	26.47

MATERIAL INSPECTION REQUEST

Contractor Company	El . Zhoor . Company			Designer Company	KK CONSULT.					
Issued by Contractor	Name	Sign		Date	COD					
	Eng \ Mahmoud elkhlawy			12-4-2023	ZH 21					
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM
							12	4	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	Fill material results				
Location to be Used	fill (0)	536+680 536+560	FILL (-0.5)	536+720 536+680	
	FLAT (-1.5)	536+800 536+780	FILL (-0.75)	536+800 536+780	
	FLAT (-1)	536+700 536+680	FILL (-0.25)	536+720 536+680	
	FILL (-1.25)	536+800 536+780	FILL (-0.5)	536+800 536+780	
	FILL (-0.75)	536+700 536+680	FILL (-0.25)	536+800 536+780	
	FILL (-1)	536+800 536+780	FILL (0)	536+720 536+680	
			FILL (0)	536+800 536+720	
MAR Approval No			Date		
Supplier Name					
Test Requirement		Specification	Clause		
Reference Photos	Yes attached / No	Other			

Item	Description	Unit	Quantity	Arrival Date	Note
1	L.L & P.L & O.M.C %	m3	5000	9 – 4 - 2023	
2	Proctor	m3	5000	9 – 4 - 2023	
3	Classification	m3	5000	9 – 4 - 2023	
4	Seive analysis	m3	5000	9 – 4 - 2023	

Comments by:	Comments by:
Asample has been taken form fill material by KK office to (mansor ali hasan) lab and the results founded meet the specificontions and accepted	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mahmoud elkhlawy			
QA/QC *	Mohamed Ali			
GARB**				
Comment by ER				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST

Contractor Company	EL ZHOOR COMPANY			Designer Company	KK				
Issued by Contractor	Name	Sign		Date	cod				
	ENG : MAHMOUD ELKHLAWY			12 – 4 – 2023	Zh 21				
Received by ER			MAR	C1	C2	C3	DD	MM	YY	HH	MM
							12	4	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	Soil classify (A 1 a)			
Location to be Used	536+000 to 537+000			
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	8.3 %	
4	ASTM D 4318	Atterberg Limit	NOn	
5	ASTM D 2974	Moisture Content	6.5 %	
6	ASTM D 1557	Modifid Proctor	2.156	
7	ASTM D 1883	C B R	48.20%	
Comments by:		Comments by:		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	MAHMOUD ELKHLAWY			
QA/QC *	Mohamed Ali			
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

Operating lab	Mersana Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	16/4/2023	Zone	530+000 to 537+000
LOCATION	K.P 536+500		
NAME COMPANY	Elsaber		

field inspection test

visual test

Gradation of bulk materials				SAMPLE WEIGHT (g)		25161.00		gm
sieve size	2	1.5	1	3/4	1/2	3/8	# 4	PASS
0.00	0.0	1436.0	4525.0	3711.0	3371.0	2770.0	5697.0	
Cumulative Retained (g)				4521.0	8227.0	11030.0	17006.0	
Cumulative Retained %				19.6	42.7	43.0	85.0	
Cumulative Passing %								

table classify	
soil classify	A-1-a
PDD	2.139
MC	5.30
CBR	66.20

Fine material gradation				WT. OF sample		500.00		gm
sieve size	10	40	200					
Cumulative Retained (g)	66.00	236.00	377.00					
Cumulative Retained %								
Cumulative Passing %								

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 %										

ATTERBERG LIMITS	LIQUID LIMIT (L.L)	[illegible]	PLASTIC INDEX (P.I)
	NL	NP	NP

Contractor		Consultant

Proctor Test

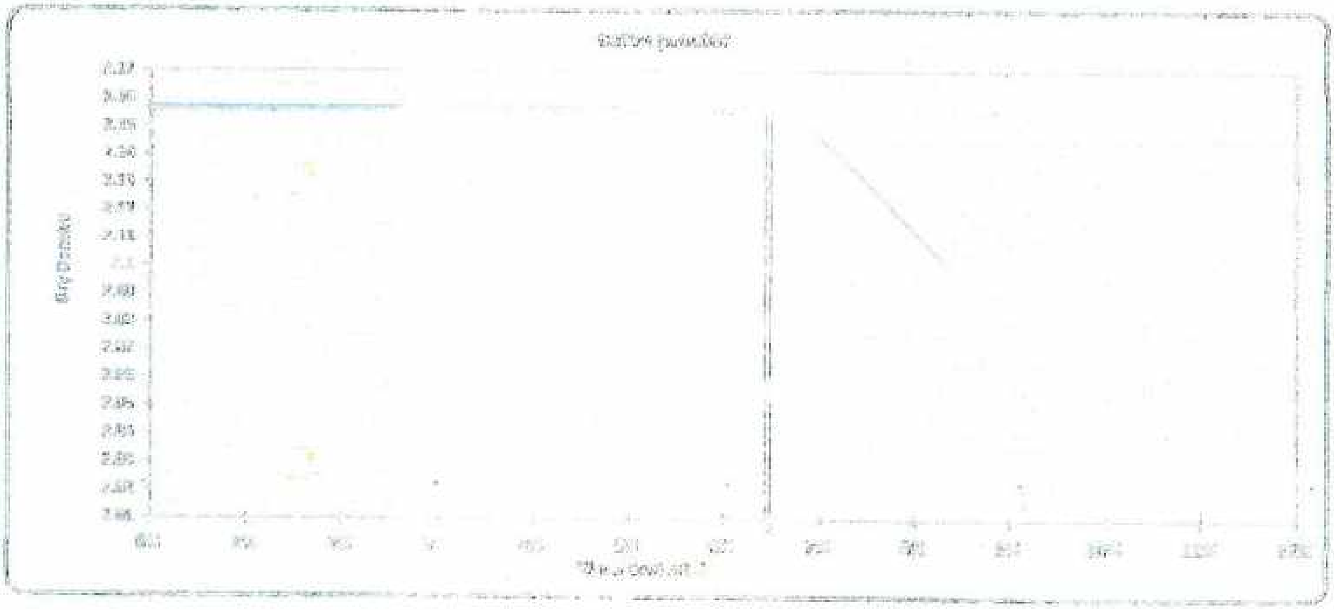
operating Lab	Museum Lab

TESTING DATE:	[illegible]		
LOCATION	[illegible]	[illegible]	[illegible]
MAIN COMPANY	[illegible]		

Weight of empty mold :	[illegible]	MAX Dry Density	2.168
Mold Volume:	2133.0	Water content %	6.5

trial no :	1	2	3	4	
Wt. Of Mold +soil	[illegible]	[illegible]	[illegible]	[illegible]	
W.T. WET Soil	[illegible]	[illegible]	[illegible]	[illegible]	
Wt. Density	2.026	2.259	2.306	2.377	

Tare No.	1	1	2	2	3	3	4	4		
Tare wt.	[illegible]	[illegible]	[illegible]	55.43	[illegible]	[illegible]	55.73	[illegible]		
Wt. Of wet soil & tare	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Wt. Of dry soil & tare	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Wt. Of water	4.8	[illegible]	7.1	7.5	[illegible]	8.7	11.2	[illegible]		
Wt. Of dry soil	[illegible]	[illegible]	137.2	[illegible]	[illegible]	136.5	[illegible]	[illegible]		
Water content %	[illegible]	[illegible]	[illegible]	[illegible]	6.5%	6.5%	[illegible]	[illegible]		
AV. Water content %	3.3%		5.5%		6.5%		7.3%			
Dry Density	2.029		2.121		2.156		2.192			



Contractor	Consultant

Unconfined Compression Test (ASTM D 2166)

1. Test Results

Unconfined Compressive Strength	

2. Loading Readings

3. Calculations

	Mohamed Ali

Electric Express Train - HSR

From El Ain El Sokhna City To El Alamein

Section -7 From FokaTo MARSA MATROUH

From Station 504+000 To Station 568+177

ACTIVITY : Sand cone test	laboratory results	COD	Z H (21)

Company :	EL-ZHOUR COMPANY	Layer level :	fill (-0.5)
Description:	Compaction tast	Layer Thickness :	0.25 m
Station represented :	536+780 TO 536+800	Sample Date :	11/10/2023

Modified Proctor Testing Results

Max. Dry Density . gm/cm3	Optimum Moisture Content . %	Degree of Compaction Required . %	Bulk Density of Specified Sand . gm/cm3
2.15	6.5	95%	1.48

Compaction Testing Results & Calculations

STATION	536+800									
Hole No.	1									
WT. of Sand befor Test ,gm	9456									
WT. of Sand After Test ,gm	5376									
WT. of Sand in Cone + hole ,gm	4080									
WT. of Sand in Cone	1140									
WT. of Sand at hole ,gm	2940									
Volume of the hole, Cm3	1986									
WT. of Soil from Hole ,gm	4378									
Bulk Density of Soil, Gm/cm3	2.204									
Moisture Content , %	6.1									
Dry Density, gm/cm3	2.077									
Compaction, (%)	96.6%									

Acceptance Criteria	Comply		Not Comply			

CONSULTANT COMMENTS	

Site engineer :-

Name :- Mahmoud El Khlawy

Signature :-

Consultant Materials Engineer :-

Name :- Momen Esmael

Signature :- 11/10/2023

ZHR - 6-172

UNIVERSAL INSPECTION REQUEST

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

SYSTRA SHAKER

الهيئة العامة للطرق والكباري

RECEIPT of NOTIFICATION - Minimum Notice Period not less than 24
The Work described below will be complete and ready for inspection at planned time shown

Contractor Company	EL . ZHOOR . COMPANY				Designer Company*			KK CONSULT.				
Issued by Contractor	Name	Sign			Date			Time				
	Eng : Mahmoud Elkhlhwy	mahmoud			9 – 10 - 2023							
Received by Employers Representative	M.A	10/9/2023	UIR		C1	C2	C3	DD	MM	YY	HH	MM
					K.P536	E W	C S	9	10	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		

EXPLANATION OF WORK TO BE INSPECTED

Description	Element	Item
Earth Works	Fill (-0.25)	From St (536+680) to (536+720)

INSPECTION DETAILS The Following will be ready at the Planned Inspection Time

Planned Inspection Date	Planned Inspection Time
9.10.2023	

COMPLIANCE EVIDENCE Must be Included as appropriate

Checklist Attached ☐	Test Results Attached ☐	Calibration Attached ☐	Other as indicated ☐
Drawing Reference	ITP Reference	MS Reference	

Civil	Survey	Material
moment esmaeel visual inspection is approved	Ahmed Ashraf levels are approved	moment esmaeel compaction test is approved 10/10/2023

INSPECTION RESULT

Organisation	Name	Sign	Date	Time	Approval Status A-AWC-R	Please Tick if Not Attend
Contractor	ENG : M. ELKHLAWY	mahmoud				
QA/QC*						
GARB**	ENG : KHALED FAWZY				A	
Employers Representative Notes						
Employers Representative Sign	M.A	10/30/2023			A	

* Designer
** Alignment: Bridges: Culvert

شيت تشغيل طبقات الردم لمشروع القطار السريع القطاع السابع (فوكه - مطروح)
شركة (الزهور)
من المحطة (536+680) إلي المحطة (536+720)

LAYER LEVEL	-0.25

STATION	LEFT SIDE					PGL			RIGHT SIDE			
	ACT. WIDTH	13.84	10	5	S.E.%	DESIGN LEVEL	FERMA LEVEL	CL	S.E.%	5	10.34	ACT. WIDTH
536+680		59.54	59.70	59.90	-4%	61.25	60.35	60.10	-4%	59.90	59.68	
Act.												
Diff.		+1	-1	+2				+1		-1	+2	
536+700		59.60	59.76	59.96	-4%	61.31	60.41	60.16	-4%	59.96	59.74	
Act.												
Diff.		+1	-2	+1				-2		+1	-2	
536+720		59.67	59.82	60.02	-4%	61.37	60.47	60.22	-4%	60.02	59.81	
Act.												
Diff.		+1	-2	+1				+1		+2	+1	

James Adly
(Total Station)

م/ محمود

MS FROM ST.(536+700) TO ST.(536+780)

Layer Zone	Layer No.	Station	536+700	536+720	536+740	536+760	536+780
		DESIGN LEVEL	61.31	61.37	61.43	61.49	61.55
		FERMA LEVEL	60.41	60.47	60.53	60.59	60.65
		CUT LEVEL	59.11	59.66	59.90	59.87	58.85
		DIFF (FERMA - CUT)	1.30	0.81	0.63	0.72	1.79
Middle Emp: Upper Empankemnt	1	0	60.41	60.47	60.53	60.59	60.65
	2	-0.25	60.16	60.22	60.28	60.34	60.40
	3	-0.5	59.91	59.97	60.03	60.09	60.15
	4	-0.75	59.66	59.72			59.90
	5	-1	59.41				59.65
	6	-1.25	59.16				59.40
	7	-1.5					59.15
	8	-1.75					58.90
	9	-2					
	10	-2.5					

M.S Approved
acc. to Design Asst. Engr
Rev-10

C.L DATA

Station	Easting	Northing
536+680	290339.5264	943913.8692
536+700	290320.2216	943919.0965
536+720	290300.9168	943924.3237

TYPICAL WIDTH

layer	slope	left	slop	right	TOTAL
0	-4.00%	13.44	-4.00%	9.94	23.38
-0.25	-4.00%	13.84	-4.00%	10.34	24.18
-0.5	-4.00%	14.24	-4.00%	10.74	24.98
-0.75	-4.00%	5	-4.00%	5	10.00
-1	0.00%	14.13	0.00%	10.84	24.98

MATERIAL INSPECTION REQUEST

Contractor Company	El . Zhoor . Company			Designer Company	KK CONSULT.					
Issued by Contractor	Name	Sign		Date	COD					
	Eng \ Mahmoud elkhlawy			12-4-2023	ZH 21					
Received by ER			MIR	C1	C2	C3	DD	MM	YY	HH	MM
							12	4	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	Fill material results				
Location to be Used	fill (0)	536+680 536+560	FILL (-0.5)	536+720 536+680	
	FLAT (-1.5)	536+800 536+780	FILL (-0.75)	536+800 536+780	
	FLAT (-1)	536+700 536+680	FILL (-0.25)	536+720 536+680	
	FILL (-1.25)	536+800 536+780	FILL (-0.5)	536+800 536+780	
	FILL (-0.75)	536+700 536+680	FILL (-0.25)	536+800 536+780	
	FILL (-1)	536+800 536+780	FILL (0)	536+720 536+680	
			FILL (0)	536+800 536+720	
MAR Approval No			Date		
Supplier Name					
Test Requirement		Specification	Clause		
Reference Photos	Yes attached / No	Other			

Item	Description	Unit	Quantity	Arrival Date	Note
1	L.L & P.L & O.M.C %	m3	5000	9 – 4 - 2023	
2	Proctor	m3	5000	9 – 4 - 2023	
3	Classification	m3	5000	9 – 4 - 2023	
4	Seive analysis	m3	5000	9 – 4 - 2023	

Comments by:	Comments by:
Asample has been taken form fill material by KK office to (mansor ali hasan) lab and the results founded meet the specificontions and accepted	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mahmoud elkhlawy			
QA/QC *	Mohamed Ali			
GARB**				
Comment by ER				
Employers Representative				

* Designer

** Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST

Contractor Company	EL ZHOOR COMPANY				Designer Company	KK					
Issued by Contractor	Name	Sign			Date	cod					
	ENG : MAHMOUD ELKHLAWY				12 – 4 – 2023	Zh 21					
Received by ER			MAR	C1	C2	C3	DD	MM	YY	HH	MM
							12	4	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	Soil classify (A 1 a)			
Location to be Used	536+000 to 537+000			
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	8.3 %	
4	ASTM D 4318	Atterberg Limit	NOn	
5	ASTM D 2974	Moisture Content	6.5 %	
6	ASTM D 1557	Modifid Proctor	2.156	
7	ASTM D 1883	C B R	48.20%	

Comments by:	Comments by:

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	MAHMOUD ELKHLAWY			
QA/QC *	Mohamed Ali			
GARB**				
Employers Representative				

* Designer

** Alignment/Bridges: Culvert only

[illegible]

Operating lab | Mansour Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	9/4/2023		Zone	536+000 to 537+000
LOCATION	K.P 536+000			
NAME COMPANY	Elzahar			

test inspection (ws)

adient test

gradation of bulk materials				SAMPLE WEIGHT (g)		25161.00		gm		table classify
sieve size	2	1.5	1	3/4	1/2	3/8	# 4	PASS		soil classify
0.00	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			A-1-a
cumulative Retained (g)				[illegible]	5237.0	11030.0	17907.0		PRD	2.150
cumulative Retained %				19.6	22.7	43.8	69.0		WC	8.90
cumulative Passing %									CBR	48.20

% material gradation				WT. of sample		500.00		gm
sieve size	10	40	200					
cumulative Retained (g)	88.00	234.00	277.00					
cumulative Retained %								
cumulative Passing %								

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 %										

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

Contractor

Consultant

MI.

[illegible]

Proctor Test

operating Lab	Museum Lab

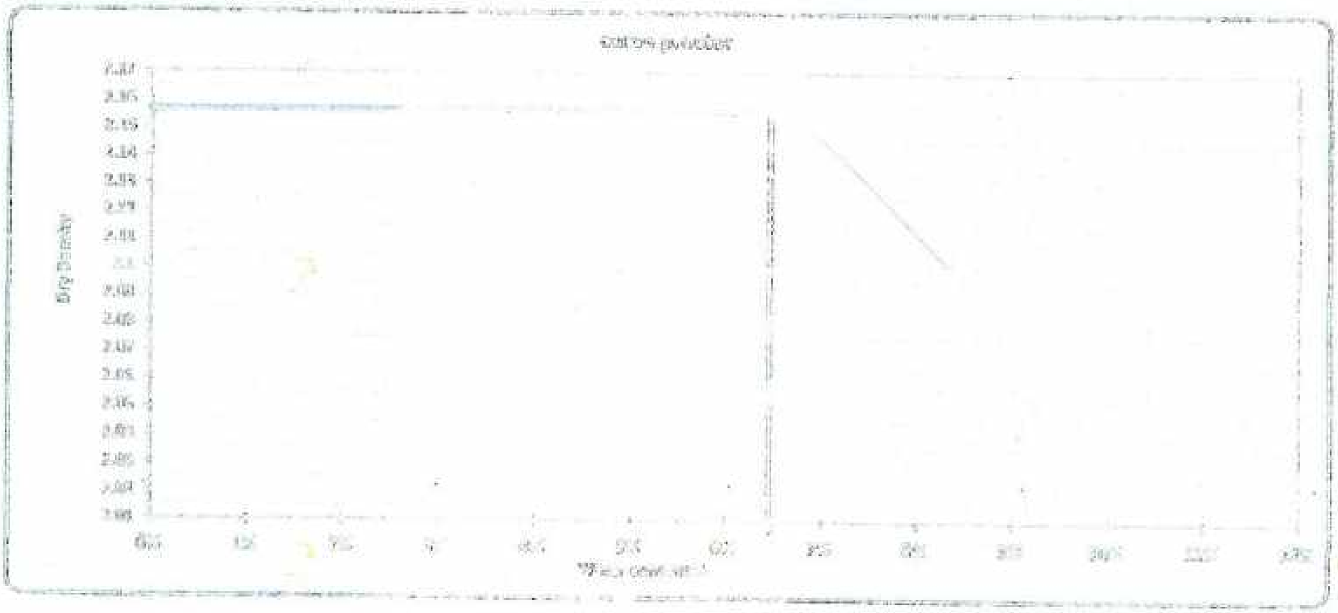
TESTING DATE:	[illegible]	Zone	[illegible]
LOCATION	[illegible]		
NAME COMPANY	[illegible]		

Weight of empty mold :	[illegible]
Mold Volume:	2133.6

MAX Dry Density	2.156
Water content %	6.5

station :	1	2	3	4	
Wt. Of Mold+ wet soil	[illegible]	[illegible]	[illegible]	[illegible]	
W.T. WET Soil	[illegible]	[illegible]	[illegible]	[illegible]	
Wt. Dens	2.103	2.238	2.296	2.277	

Tare No.	1	3	4	5	2	6	7	8		
Tare wt.	58.08	58.5	[illegible]	58.32	[illegible]	[illegible]	[illegible]	[illegible]		
Wt. Of wet soil & tare	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0		
Wt. Of dry soil & tare	195.5	[illegible]	[illegible]	[illegible]	[illegible]	191	[illegible]	189.3		
Wt. Of water	4.5	[illegible]	[illegible]	[illegible]	8.7	8.7	11.2	10.7		
Wt. Of dry soil	136.7	[illegible]	[illegible]	[illegible]	132.5	132.5	130.0	131.4		
Water content %	3.3%	3.3%	[illegible]	5.2%	6.5%	6.5%	8.3%	8.2%		
AV Water content %	3.3%		5.2%		6.5%		8.3%			
Dry Density	2.037		2.124		2.156		2.102			



Contractor

Consultant

[illegible]

California Bearing Ratio TEST

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]				
[illegible]	[illegible]				

Test Results

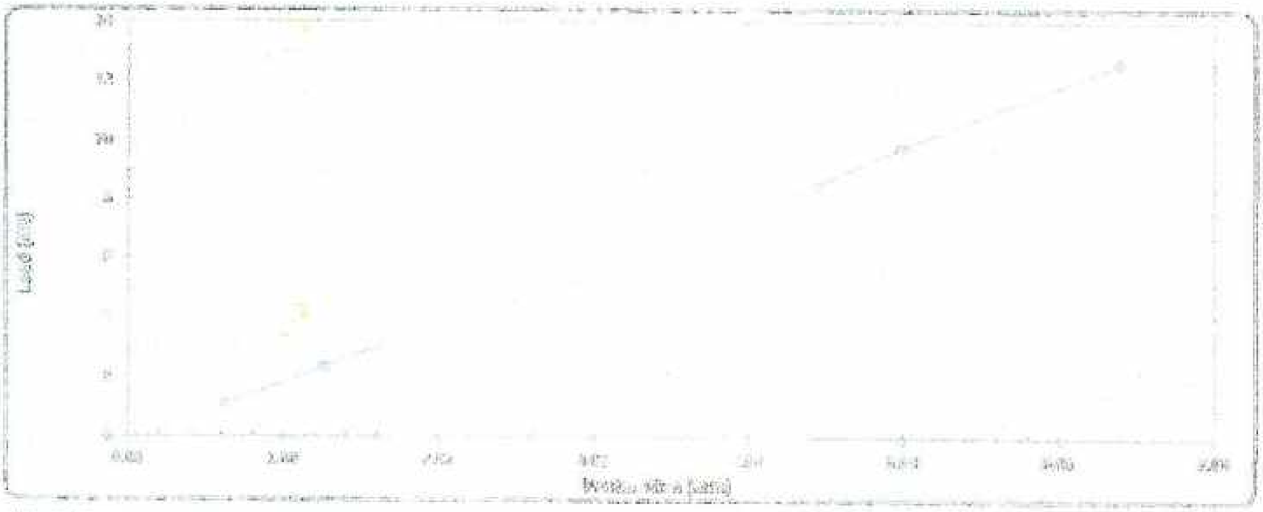
Compaction % in Field	
Mould No.	1
Mould Vol. (cm^3)	[illegible]
Mould Wt. (gm)	[illegible]
[illegible]	[illegible]
Wet Wt. (gm)	[illegible]
Wet Density (g/cm^3)	[illegible]
Dry Density (g/cm^3)	[illegible]
Proctor Density (g/cm^3)	[illegible]
Compaction %	[illegible]

[illegible]	
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Swelling	
Mould No.	1
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Swelling %	[illegible]

Loading Readings :

Penetration (mm)	[illegible]	1.27	1.91	2.54	3.18	3.81	4.45	5.08	[illegible]
Load Reading	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]
Load (kN)	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]



Calculations :

Penetration	Load	Standard Load	CBR	[illegible]	[illegible]	CBR
(mm)	(kN)	(kN)	(%)	[illegible]	[illegible]	[illegible]
2.54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.08	[illegible]	[illegible]	[illegible]			[illegible]

Lab. [illegible]

Name: [illegible]

Sign:

[illegible]

Name: Mohammed Ali

Sign: [illegible]

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

ACTIVITY : Sand cone test	laboratory results	COD	Z H (21)

Company :	EL-ZHOUR COMPANY	Layer level :	fill (-0.25)
Description:	Compaction tast	Layer Thickness :	0.25 m
Station represented :	536+680 TO 536+720	Sample Date :	10/10/2023

Modified Proctor Testing Results

Max. Dry Density . gm/cm3	Optimum Moisture Content . %	Degree of Compaction Required . %	Bulk Density of Specified Sand . gm/cm3
2.15	6.5	95%	1.48

Compaction Testing Results & Calculations

STATION	536+705	536+720								
Hole No.	1	2								
WT, of Sand befor Test ,gm	9548	9736								
WT, of Sand After Test ,gm	5469	5618								
WT, of Sand in Cone + hole ,gm	4079	4118								
WT, of Sand in Cone	1140	1140								
WT, of Sand at hole ,gm	2939	2978								
Volume of the hole, Cm3	1986	2012								
WT, of Soil from Hole ,gm	4386	4437								
Bulk Density of Soil, Gm/cm3	2.209	2.205								
Moisture Content , %	5.9	6.4								
Dry Density, gm/cm3	2.086	2.072								
Compaction, (%)	97.0%	96.4%								

Acceptance Criteria	Comply		Not Comply		

CONSULTANT COMMENTS	

Site engineer :-

Name :- Mahmoud El Khlawy

Signature :-

Consultant Materials Engineer :-

Name :- Momen esmaeel

Signature :- 10/10/2023