



أحمد مرسوق

٢٠٢٣/١٠/١٢

١٢/١٠/٢٠٢٣

٣٠٠٠
١٠٠٠
٢٠٠٠

السيد العميد / رئيس الإدارة المركزية

للشئون المالية والإدارية

تحية طيبة وبعد ..

مرفق طيه أصل موافقة السيد اللواء مهندس / رئيس مجلس الإدارة علي المقايسة المعدلة الخاصة بعملية اعمال الجسر لمشروع ازدواج خط سكة حديد (عدلي منصور - الروبيكي) تنفيذ الشركة المصرية للصيانة الذاتية للطرق والمطارات - إشراف المنطقة الاولى - المركزية .

يرجي التكرم بالإحاطة والتنبيه باللازم .

وتفضلوا بقبول فائق الاحترام ،،

رئيس قطاع التنفيذ والمناطق

تحريرا في ٢٠٢٣/١٠/١٢

مهندس /

” محسن محمد زهران ”

مرفقات عدد ()

الهيئة العامة للطرق والكبارى والنقل البرى	رقم الملف ٦٢٩١
قسم الشؤون المالية والإدارية	عدد المرفقات ١
التاريخ ٢٠٢٣/١٠/١٢	التوقيع محسن محمد زهران

صورة مرسلة للسيد المهندس / رئيس الادارة المركزية
للمنطقة الاولى المركزية

تحية طيبة وبعد ..

يرجي التكرم بالإحاطة والتنبيه باللازم .

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الهيئة العامة للطرق والكبارى والنقل البرى	رقم الملف ٦٢٩١
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مقايضة معدلة

واردة من المنطقة الاولى - (المركزية)

اسم المصلحة :- اعمت الجسر لمشروع ازواج خط سكة حديد (عذلي منصور - الدويكي)

اسم الشركة المستفدة :- الشركة المصرية للصيانة الذاتية للطرق والمطارات

(٢٠٢٢/٢٠٢٢/١٢٦١) - : التعليمية

قيمة العمالية في التعاقد : ٨٩,٠٤٦ مليون جنيه

تاريخ الجلسة :- ٢٠٢٣/١/٢٥

تاريخ نمو العمل طبقا للمقد الأصلي :- ٢٠٢٣/٧/٢٤

قيمة المقايضة المعدلة المطلوب اعتمادها : ٨٩,٠٤٦ مليون جنيه

نسبة النقص أو الزيادة عن العقد الاصلى :- (صفر %)

المسؤوليات

- بدءاً على كُتّاب المصنعة المشرفة بتعديل كميات البنود بالزيادة أو النقصان طبقاً لما يتم تنفيذه

على انضوية

- طبقاً لمحضرات المفوضية على أسعار البنود المستحدثة ،

إِسْمَاعِيلُ بْنُ عَبْدِ اللَّهِ بْنِ أَبِي بَكْرٍ

مدير عام (صيانة التنفيذ) :

رئيس الإدارة المركزية للشؤون

رأى الشئون القانونية: بمرکز

١٢٠

وہی ہے جس نے ان کو پیدا کیا۔

و نفس قطاع التنفيذ والمناطق

“يَقْتَدِرُ

التوقيع)

لواء مهندس / حسام الدين مصطفى

رئيس الهيئة العامة للطرق والكبارى

تقریباً فی ۱۰/۹۰۰۰

سيوط
أسبوط

تنفيذ أعمال الجسر القروي لمشروع ازدواج خط سكة حديد (عدي منصور - حرس) المرحلة الأولى المركزية				
التفصيل المبتدأ 2				
الكمية	الاسم	الوحدة	العدد	ملاحظات
1	أعمال الجسر			
18,240,000	64	285,000	3م	بأثر المكعب حفر باستخدام المعدات كاتريكس لجميع أنواع التربة عدا التربة الصخرية واستوي السطح بالآلات التسوية والرش بالهيدروكربيد لتسوية السطح والدمك الجيد بالهيدروكربيد في اقصي كثافة جافة (95% من الكثافة الجافة القصوى) وحمل على البند تحمل ونقل الآليات الفرقة لمسافة 500 متر من محور الطريق ويتم تنفيذ طبقا للمناسيب التصميمية والقطاعات العرضية التوضيحية والرسومات التنفيذية والمنفعة والبند بجميع مشتتاته طبقا لاسول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف (مسافة النقل 32 كم)
1,782,000	33	54,000	3م	بأثر المكعب حفر باستخدام المعدات كاتريكس لجميع أنواع التربة عدا التربة الصخرية (استخدم نتج الحفر في أعمال الردم) واستوي السطح بالآلات التسوية والرش بالهيدروكربيد لتسوية السطح والدمك الجيد بالهيدروكربيد في اقصي كثافة جافة (95% من الكثافة الجافة القصوى) وحمل على البند تحمل ونقل الآليات الفرقة لمسافة 500 متر من محور الطريق ويتم تنفيذ طبقا للمناسيب التصميمية والقطاعات العرضية التوضيحية والرسومات التنفيذية والمنفعة والبند بجميع مشتتاته طبقا لاسول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف (مسافة النقل 7 كم)
432,000	108	4,000	3م	بأثر المكعب أعمال حفر بالمعدات الميكانيكية في تربة صخرية
86,000	123	699.19	3م	لجود (200-100) ليوهار (300-200) محمل على البند الآتي:
				1- تحميل ونقل نتج الحفر لمسافة لا تقل عن 500 متر 2- إزالة المواد الجارية باستخدام المعدات كاتريكس توزيع التربة مطابقة للمواصفات وتشيدها باستخدام آلات التسوية بسك لا يزيد عن 25 سم لاستكمال المنسوب التصميمي لتشكيل الجسر والاكلاف (نسبة حمل كاتريونيا لا تقل عن 10%) ورشها بالهيدروكربيد لتسوية السطح والدمك الجيد بالهيدروكربيد في اقصي كثافة جافة (95% من الكثافة الجافة القصوى) ويتم تنفيذ طبقا للمناسيب التصميمية والقطاعات العرضية التوضيحية والمنفعة والبند بجميع مشتتاته طبقا لاسول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف (مسافة النقل لا تقل عن 40 كم) يتم إضافة 1.2 جنيه لكل كم زيادة
18,200,000	91	200,000	3م	بأثر المكعب أعمال توريد وتشغيل ونقل التربة صالحة للردم مطابقة للمواصفات وتشدها باستخدام آلات التسوية بسك لا يزيد عن 25 سم لاستكمال المنسوب التصميمي لتشكيل الجسر والاكلاف (نسبة حمل كاتريونيا لا تقل عن 10%) ورشها بالهيدروكربيد لتسوية السطح والدمك الجيد بالهيدروكربيد في اقصي كثافة جافة (95% من الكثافة الجافة القصوى) ويتم تنفيذ طبقا للمناسيب التصميمية والقطاعات العرضية التوضيحية والرسومات التنفيذية والمنفعة والبند بجميع مشتتاته طبقا لاسول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف (مسافة النقل لا تقل عن 40 كم) يتم إضافة 1.2 جنيه لكل كم زيادة
2,106,000	39	54,000	3م	بأثر المكعب أعمال تشغيل ونقل التربة صالحة للردم (من نتاج الحفر) مطابقة للمواصفات وتشدها باستخدام آلات التسوية بسك لا يزيد عن 25 سم لاستكمال المنسوب التصميمي لتشكيل الجسر والاكلاف (نسبة حمل كاتريونيا لا تقل عن 10%) ورشها بالهيدروكربيد لتسوية السطح والدمك الجيد بالهيدروكربيد في اقصي كثافة جافة (95% من الكثافة الجافة القصوى) ويتم تنفيذ طبقا للمناسيب التصميمية والقطاعات العرضية التوضيحية والرسومات التنفيذية والمنفعة والبند بجميع مشتتاته طبقا لاسول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف
65,000	100	650	3م	بأثر المكعب أعمال تكسير وإزالة مباني أو خرسانة عادية أو مسلحة أو أرضية أو ديش مع نقل ناتج التكسير خارج الموقع للمقاب العمومية طبقا لتعليمات المهندس المشرف لمانعة نقل لا تقل عن 30 كم
18,315,000	407	45,000	3م	بأثر المكعب أعمال توريد وفرش طبقة أساس من الأحجار الصلبة المتدربة نتج تكسير الكسارات والمطابقة للمواصفات وتندرج المواد بالإشتراطات العامة والخاصة والمشروع لا تقل نسبة حمل كاتريونيا عن 80% ولا يزيد نسبة الفاقد بجهاز لوس تجلوس عن 40% ولا يزيد الانتماس عن 10% وفريدها على طبقتين باستخدام آلات التسوية الحديثة على أن لا يزيد سمك الطبقة بعد تمام الدمك عن 15 سم ورشها بالهيدروكربيد لتسوية السطح والدمك الجيد بالهيدروكربيد في اقصي كثافة جافة (95% من الكثافة الجافة القصوى) ويتم تنفيذ طبقا للمناسيب التصميمية والقطاعات العرضية التوضيحية والمنفعة والبند بجميع مشتتاته طبقا لاسول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف (مسافة النقل لا تقل عن 130 كم)
12,825,000	285	45,000	2م	بأثر المسطح توريد وصب وخرسانة عادية سمك 15 سم لحماية الاكلاف والمواد الجانبية لتكون من 3م 0.8 سم دلووميت 3م 0.4 رمل حرس 250+ كجم اسمنت بوزلاندي عادي على أن يكون السك نظيف ومغسول والرمال خالي من الشوائب والطفلة والأحجار والمواد الغريبة والبند يشمل تجهيز واستعمال مناسيب التربة الطبيعية أسفل البلاطة للوصول إلى المناسيب التصميمية على أن تحلق الخرسانة لجهاد لا يقل عن 200 كجم/سم ² وتشطيب السطح وتنفيذ طبقا لاسول الصناعة والرسومات التنفيذية والمنفعة والبند بجميع مشتتاته طبقا لاسول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف
1,893,600	1,800	1,052	3م	بأثر المكعب أعمال توريد وصب وخرسانة عادية لحماية مواسير البوابات طبقا للرسومات التنفيذية ذات محتوى اسمنت 250 كجم/م ³ اسمنت بوزلاندي مع الدمك الميكانيكي على ألا يقل لجهاد الكسر للمباني عن 200 كجم/سم ² مع اجراء الاختبارات اللازمة ويتم تنفيذ طبقا لاسول الصناعة والرسومات التنفيذية والمنفعة والبند بجميع مشتتاته طبقا لاسول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف
937,500	1,875	500	م ط	بأثر العلو توريد وتركيب بوابات التجهيز قطر داخلي 1م وبمساحة 1.1م ² من الخرسانة المسلحة بترتيب خالص (350 كجم اسمنت مقاوم للكبريتات 0.8م 3م 0.4 رمل 3م 0.4 رمل) باستخدام شبكة من حديد التسليح المشترشر عالي المقاومة رتبة 36/52 بمعدل 10-5 سم للمر العلو في الجاه محور الماسورة بمعدل 16-6 سم للمر الطولي في الاتجاه العرضي مع تدعيم المحوري بالهيدروكربيد ورش من الحديد مع عزل الوصلات بالخيش العفولون ويتم تنفيذ طبقا لاسول الصناعة والرسومات التنفيذية والمنفعة والبند بجميع مشتتاته طبقا لاسول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف
1,300,000	1,300	1,000	بالحد	بالحد رفع بالوكات لاسوار لزوم دخول المعدات والمواد
4,000,000	5	800,000	2م	تسوية الأرضية بجوار سوا ما بين السكة الحديد وسور منو الأتفال وأهاليها قبل البناء
90,000	90,000	1	بالحد	توافر عدد (1) كرفان مجها للسكة الحديد في الموقع
3,600,000	3,600	1,000	بالحد	تكاليف اختبار (plate load test) طبقا لتعليمات المهندس المشرف
				بأثر المكعب إزالة مخلفات بالأعمال المطلوبة وحمل على البند تحمل ونقل المخلفات إلى المقاب العمومية والبند بجميع مشتتاته طبقا لاسول الصناعة ومواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف
5,100,000	51	100,000	3م	مسافة نقل 38 كم
1,300	330	10	3م	بأثر المكعب تكسير خرسانة مساحة (باستخدام المعاملة اليدوية) والسعر لحمل كل ما يارز لكو العمل كاملا بأمان ونقل المخلفات إلى المقاب العمومية وهو العمل والبند شامل مما جنيته طبقا لاسول الصناعة والرسومات والمواصفات وتعليمات المهندس المشرف مع اسليم حديد التسليح للمالك
21,600	2,160	10	3م	بأثر المكعب توريد وصب وخرسانة مسلحة المعنوية بالمواقع مع استخدام اسمنت بوزلاندي عادي وحمل على البند تحمل ونقل 400 كجم / سم ³ واجهاد لا يقل عن 150 كجم / سم ³ والسعر لا يشمل حديد التسليح
47,000	47,000	1	طن	بأمان توريد وتركيب ورش حديد التسليح (60/40) لزوم جميع العناصر الإضافية والسعر يشمل التفصيل طبقا للرسومات وأعمال الوصلات والسعر يشمل أيضاً الاختبارات وفق المعتمدات اللازمة لنقل الحديد والحديد المشكل داخل المواقع والمعدات اللازمة لتركيب وإنتاج وإدخال دفع الحديد والسعر يشمل كل ما يارز لكو العمل كاملا طبقا لاسول الصناعة والرسومات والمواصفات وتعليمات المهندس المشرف
89,046,000				الإجمالي (فقط وأبدى لسمه والمادون مليوناً و ستة و أربعون ألف جنيهاً لا غير)

smart roads

شركة المصرية للصيانة والتطوير للطرق والمطارات (ش.م.م.)

ENR Projects

تفصيل أعمال الحفر الترابي للمشروع الدواج خط سكة حديد (عدلي منصور - الروبيكي)

المنطقة الأولى المركزية

المقاييس المعدلة 2

م	البند	الوحدة	الكمية	السعر	القيمة
					89,046,000.00
	الاجمالي (فقط و قدره تسعة و ثمانون مليوناً و ستة و اربعون الف جنيها لا غير				

مهندس المشروع المالك

١٣
مهندس | محمد صديق

التوقيع :

استشاري الهيئة العامة للطرق والكباري

استشاري المالك المهندس | اسلام حسين

التوقيع :

المقاول | الشركة المصرية للصيانة الذاتية

مهندس الشركة | سيد محمد محمد

التوقيع :

مدير مشروع المالك

مهندسة | مشيرة السيد

التوقيع :

يعتمد

رئيس الادارة المركزية

التوقيع :

المهندس | نصر محمد طيخ



تتبع أعمال الجسر الترابي لمشروع الزداج خط سكة حديد (عربي منصور - الزداج)

تتبع الشركة المصرية للصيانة الثانية للطرق والمطارات

البرنامج الترابي للمشروع



الهيئة العامة
للمطارات والكباري و
الأنفاق (GARBL)



الهيئة العامة
للمطارات والكباري و
الأنفاق (GARBL)

التاريخ

رقم	الحديقة المصانة ١		بيان الأعمال
	الكمية	القيمة	
١	٣٥٥,٥٠٠	٢١,١٨١,٠٠٠	أعمال سكر
٢	٢٨٠,٥٠٠	٢٠,٥٤٢,٠٠٠	أعمال ردم
٣	٤٥,٠٠٠	١٨,٣٦٤,٠٠٠	أعمال طبقة الأساس
٤	٨٥٩	٨٥,٩٢٠	أعمال ترميم
٥	٩٠,٠٠٠	١٧,١٠٠,٠٠٠	أعمال صيانة كسول
٦	٥٠٠	٥٥٧,٥٠٠	أعمال الترخيب
٧	١,٠٨٢	١,٨٥٢,٥٠٠	أعمال فريسة حديدية حول الترخيب
٨	٩٠٩,٠٨٠	٤,٤٠٠,٠٠٠	أعمال لصبية
٩	١,٠٥٠	١,٣٠٠,٠٠٠	أعمال رافق مؤقت
١٠	١	٩٠,٠٠٠	تجهيزات كرفان
١١	١٥,٠٨٠	٤,١٠,٠٠٠	زودة طماق بآلات حفرية
١٢	١٠	٢,٣٠٠	تجهيزات حفرية
١٣	١٠	٢٣,٥٠٠	قوة ومعدات حفرية
١٤	١	٤٧,٠٠٠	قوة ومعدات حفرية

مدير عام الشركة

مدير عام الشركة

مدير عام الشركة

مدير عام الشركة

مدير عام الشركة





تنفيذ أعمال الجسر الرابي لمشروع ازدواج خط سكة حديد (عدي منصور-الروبيكي)

تنفيذ الشركة المصرية للصيانة الداخلية للطرق والمطارات

البرنامج الزمني للمشروع



الهيئة العامة
للقطارات والكابري و النقل البري
(GARBLT)



التاريخ

مستخرج													المقايمة المعدلة 1		الوحدة	بيان الاعمال
يونيو 2023		يونيو 2023		مايو 2023		أبريل 2023		مارس 2023		فبراير 2023		القيمة	الكمية			
النصف الثاني	النصف الأول	النصف الثاني	النصف الأول	النصف الثاني	النصف الأول	النصف الثاني	النصف الأول	النصف الثاني	النصف الأول	النصف الثاني	النصف الأول					
				2,433,000							13,550,000	21,183,000	853,200	3٢	أعمال حفر	
			2,087,000		2,000,000		832,000		3,080,000		14,540,540	28,540,000	246,000	3٢	أعمال ردم	
			3,500,000		3,000,000		560,000		500,000		0,075,315	18,315,000	45,000	3٢	أعمال طبقة التأسيس	
											31,225	86,900	800	3٢	أعمال تسقيف	

رئيس الإدارة المركزية

مهندس محمد / محمد / محمد

مهندس محمد / محمد / محمد



الشركة المصرية للصيانة الداخلية
للطرق والمطارات - ش.م.م
ENR Projects

الشركة المصرية للصيانة الداخلية
للطرق والمطارات - ش.م.م
ENR Projects



مشروع أعمال الجسر الترابي لمشروع خط السكة حديد بيان المعدات و العاملين

العدد

المعدات

٢	جرير
٢	لودر
١٠	قلابات
٢	تاك مياه
٢	هرايس أتربة
٠	بوب كات
٢	حفار



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بيان المعدات



الترتيب	الوظيفة	الاسم	عدد
١	مدير المشروع	م. مصطفى حسان	١
٢	مدير التنفيذ	م. سيد محمد محمد	١
٣	مدير المكتب الفني	م. مصطفى الحلو (شركة سمارة)	١
٤	مدير ضبط الجودة	م. الخضر محمد	١
٥	مدير السلامة الوقائية	م. أحمد صلاح	١
٦	مهندس تنفيذ	م. عمر أحمد (شركة سمارة)	١
٧	مهندس تخطيط وبرمجة زمنية	م. رويدا أحمد (شركة سمارة)	١
٨	مراقب تنفيذ/فني مواد	١. محمد صلاح محمد عباس ٢. وائل ربيع حسب الله	٢
٩	حاسب كميات	م. عمر محمد شبل (شركة سمارة)	١
١٠	فني صحة سلامة	١. مصطفى مجدى ٢. محمد هاشم عبد الرحيم	٢
	مساح	١. علاء الدين سيد رجب ٢. ناصر عبد الوهاب	٢

بيان العاملين



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الاجهز	م
جهاز CBR ديجيتال وملحقاته	١
جهاز قياس نسبة الانتفاش مع حوض الامتلايس	٢
مناخل قياسية.	٣
جهاز حد السيولة ومشتمالاته	٤
جهاز تقسيم العينات متعدد	٥
أجهزة البروكتور ٤ بوصة و ٦ بوصة مع مشتمالاته.	6
جهاز لوس انجلوس	7
جهاز تكسير المكعبات مع عدد ٥٠ مكعب ١٥*١٥*١٠ مع ١٠ جهاز Slump test	8
افران تجفيف ٢٠٠ لتر ديجيتال مع ميكرويف	9
حوض لغمر المكعبات الخرسانية	10
موازين حساسة ديجيتال	11
معدات اختبار المساند كون	12
جهاز لوح التحميل (Plate load Test)	13
جهاز K30	14

بيان الأجهزة المعملية



١٢/٨/٢٠١٢

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السيد المهندس / رئيس قطاع التنفيذ والمناطق

تحية طيبة ... وبعد ،،،

بالاحالة الى العقد رقم (١٢٦١ / ٢٠٢٢ / ٢٠٢٣) بتاريخ ٢٣/١/٢٠٢٣
تنفيذ اعمال الجسر الترابي لمشروع ازدواج خط سكة حديد (عدلي منصور - الروبيكي)
(بالأمر المباشر)

تنفيذ شركة / الشركة المصرية للصيانة الذاتية للطرق والمطارات
برجاء التكرم بالاحاطه بان العقد بعاليه يشمل عدد (٢) سيارة بيك اب دفع رباعى ولايوجد
اى محملات اخرى

برجاء التفضل بالاحاطة والتوجيه باللازم...

وتفضلوا بقبول وافر الاحترام

تحريراً فى : ١٣ / ١١ / ٢٠٢٣

يعتمد ،،،
رئيس الإدارة المركزية
نصر محمد طيخ



مهندس /

مشروع أعمال الجسر الترابي لازدواج خط السكة
حديد من محطة (عدلي منصور - الروبيكي)

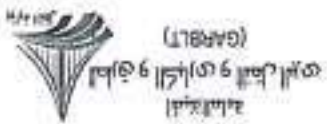
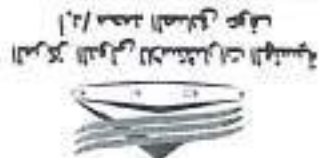
تقرير الاختبارات المعملية

مستخلص جاري (٤)

تقرير الاختبارات المعملية عطي طيفيات الازدحم

CONTRACTOR		CONSULTANT		OWNER	
					
TEST RESULT					
Request Date : 31-07-2023		Subtotal No :		EMB-ENR-LB-0045	
Test Request Ref No : EMB-ENR-LB-0048-A		Section / Location :		(B1)	
Test Type		☐ Concrete ☐ Soil ☐ Other			
Test Location		☐ In- ☒ Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachement			
(-) اختبار نسبة الماء الزائدة على الحصى (Sand Cone Test ASTM D1556) لطريق المخطط البرقي (43+920) إلى (44+160) (10.00 متر محطة)					
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CONTRACTOR		CONSULTANT	
 SMART		 وزارة الموارد المائية	
 وزارة التخطيط		 وزارة الصحة	
TEST REQUEST			
Request Date : 30-07-2023		Submit No : EMB-ENR-LB-0048	
Test Request Ref No : EMB-ENR-LB-0048-A		Section / Location : (B1)	
Test Type ☐ Concrete ☐ Soil ☐ Other		Test Location ☐ In-Site ☐ Out Site Lab ☐ Others	
Description		Ref. Attachment	
(0.00-) التربة من المسحب على طبقة (Sand Cone Test ASTM D1556) الخروط الرمي (44+160) في (43+920) متر محطة اختبار لينة التربة من طريق الخروط الرمي			
Consultant Comments			
(H) Approved			
Approval Status			
☒ Approved		☐ Resubmit As Noted	
☐ Approved As Noted		☐ Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.			
Contractor		Consultant	
Name :		Name :	
Signature :		Signature :	
Date :	01-08-2023	Date :	01/08/2023



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Testing Date: 30-07-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: B-1- From Station 43+920 TO 44+160

Level: Embankment (-0.00)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
43+920	2.184	5.9	2.061	2.090	98.6
43+970	2.158	6.4	2.029	2.090	97.1
44+020	2.171	6.2	2.044	2.090	97.8
44+070	2.156	6.4	2.027	2.090	97.0
44+120	2.154	6.0	2.032	2.090	97.2
44+160	2.154	6.1	2.031	2.090	97.2

The samples is **COMPLYING** with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Approved by Project Manager

Prepared by D.E. Mohamed Salah

Eng. El Khedr Abotalib

Eng. Hossam Ismail

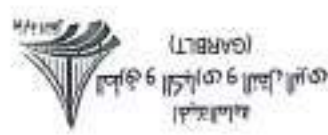
1/1

CONTRACTOR:		CONSULTANT:		OWNER:	
					
TEST RESULT					
Request Date : 04-08 - 2023		Submission No :		EMR-ENR-LB-0055	
Test Request Ref No : EMR-ENR-LB-0055-A		Section / Location :		(B1)	
Test Type ☐ Concrete ☐ Soil ☐ Other		Test Location ☐ In- ☒ Site ☐ Our Site Lab ☐ Others			
Description		Ref. Attachment			
-) نتيجة اختبار نسبة الماء الزائدة من طريق المخروط الزنبري (Sand Cone Test ASTM D1556) لطبقة على مستوى من المنطقة (A) لنتيجة اختبار نسبة الماء الزائدة من طريق المخروط الزنبري (43+000) إلى (43+060) بمساحة 10.25					
Consultant Comments					
(A) Approved					
Approval Status					
☒ Approved		☐ Resubmit As Noted		☐ Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents					
Contractor Name : Signature : Date :		Consultant Name : Signature : Date :			

CONTRACTOR 		CONSULTANT 		OWNER 	
موقع / موقع خط المسكة الجديد على محور / الطريق					
TEST REQUEST					
Request Date : 03-08-2023		Submital No :		EMB-ENR-LB-0055	
Test Request Ref No : EMB-ENR-LB-0055-A		Section / Location :		(01)	
Test Type ☐ Concret ☒ Soil ☐ Other		Test Location ☐ In- Site ☐ Out Site Lab ☐ Others			
Description (0.25-) لطيفة على منسوب من الطريق (Sand Cone Test ASTM D1556) الرطبي (43+000) إلى (43+060) من محطة اختبار لسيارة خفيفة من طريق المحور / الطريق (43+000) إلى (43+060) من محطة		Ref. Attachement			
Consulant Comments					
APPROVED					
Approval Status					
☒ Approved		☐ Resubmit As Noted			
☐ B		☐ D		☐ Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents					
Contractor Name : Signature : Date :		Consulant Name : Signature : Date :			



الهيئة العامة للغذاء والدواء
البحرين
Ministry of Health
Bahrain



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556

Testing Date: 03-08-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: B-1- From Station 43+000 TO 43+060

Level: Embankment (-0.25)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
43+000	2.164	5.9	2.043	2.090	97.8
43+060	2.175	5.7	2.057	2.090	98.4

The samples Is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Prepared by D.C: Mohamed Salah

Eng. Hossam Ismail

Approved by Project Manager

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 CONTRACTOR:	 CONSULTANT:	 OWNER:
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TEST RESULT

Request Date : 06-08-2023	Submital No :	EMAB-ENR-LB-039
Test Request Ref No : EMAB-ENR-LB-039-A	Section / Location :	(A5)
Test Type	☐ Concrete ☐ Soil ☐ Other	
Test Location	☐ In-Site ☐ Out Site Lab ☐ Others	

Description نتيجۃ اختبار لسيۃ دملۃ التربة عن طريق المخروط الرئي (Sand Cone Test ASTM D1556) (طابقۃ على مسجولۃ من التربة -) (38+460) الي (38+360) محطة 0.50 متر من	Ref. Attachement
--	------------------

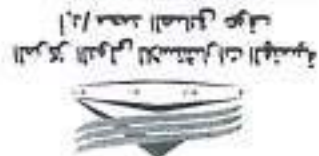
Consultant Comments	
① Approved	
Approval Status	
☒ Approved	C
☐ Resubmit As Noted	
☐ Approved As Noted	D
☐ Rejected	

Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents

Contractor	Name :	
	Signature :	
	Date :	C.C.K - A - 7

Consultant	Name :	
	Signature :	
	Date :	C.C.K / A / 7

OWNER		CONSULTANT		CONTRACTOR	
 وزارة الأشغال العامة والإسكان المديرية العامة للإسكان المديرية العامة للإسكان المديرية العامة للإسكان		 المديرية العامة للإسكان المديرية العامة للإسكان المديرية العامة للإسكان المديرية العامة للإسكان		 المديرية العامة للإسكان المديرية العامة للإسكان المديرية العامة للإسكان المديرية العامة للإسكان	
TEST REQUEST					
Request Date : 05-08-2023		Submital No :		EMB-ENR-LB-039	
Test Request Ref No : EMB-ENR-LB-039-A		Section / Location :		(A5)	
Test Type		☐ Concrete ☐ Soil ☐ Other			
Test Location		☐ In-Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
اختبار نسبة الماء الى الرمال (Sand Cone Test ASTM D1556) طبقا على المنسوب من التربة (0.50-) (38+460) الى (38+360) متر من محطة					
Consultant Comments					
Approved					
Approval Status					
Approved		C		Result As Noted	
B		D		Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents					
Contractor		Name :		Consultant	
Signature :		Signature :		Signature :	
Date :		Date :		Date :	



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Testing Date: 05-08-2023

Date: 6/8/2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: A-5- From Station (38+360) TO (38+460)

Level: Embankment (-0.50) from Ferna

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+360	2.013	8.9	1.848	1.910	96.8
38+410	2.028	8.3	1.873	1.910	98.1
38+460	1.978	8.1	1.829	1.910	95.8

The samples Is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Lower Embankment Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

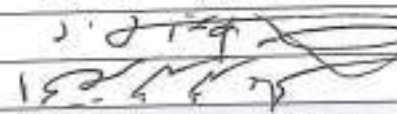
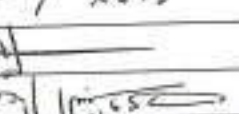
Approved by Project Manager

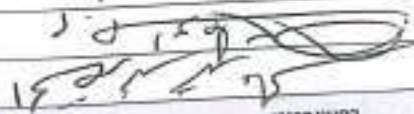
Prepared by D.C: Mohamed Salah

Eng. El Khedr Abotalib

Eng. Hossam Ismail

CONTRACTOR		CONSULTANT		OWNER	
					
TEST RESULT					
Request Date : 08-08-2023		Submital No :		EMB-ENR-1B-043	
Test Request Ref No : EMB-ENR-1B-043-A		Section / Location :		(A5)	
Test Type		☐ Concrete ☐ Soil ☐ Other			
Test Location		☐ In-Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
(-) لطيفة على المنسوب من التربة (Sand Cone Test ASTM D1556) لطريق المجرى الريفي (38+360) إلى (38+460) بعمق 0.25 متر نتيجة اختبار نسبة دملك التربة عن طريق المنسوب الريفي (38+360) إلى (38+460) بعمق 0.25 متر					
Approval Status					
☒ Approved		☐ Resubmit As Noted			
☐ B		☐ D		☐ Rejected	
Note: The above works have been approved according to the project specifications, approved working drawings and contract documents.					
Contractor		Consultant			
Name :		Name :			
Signature :		Signature :			
Date :		Date :		01/08/2023	
Consultant Comments					

							
TEST REQUEST							
Request Date : 07-08-2023		Submit No :		EMB-ENR-LB-043			
Test Request Ref No : EMB-ENR-LB-043-A				Section / Location :		(A5)	
Test Type		☐ Concrete ☒ Soil ☐ Other		Test Location			
		☐ In-Site ☐ Out Site Lab ☐ Others		Description			
				Ref. Attachment			
(0.25-) لطيفة على ماسوب على الطريق (Sand Cone Test ASTM D1556) الطريق المحروط الطريق (38+360) إلى (38+460) متر من محطة اختبار لسيارة حمولة الأتربة عن طريق المحروط الطريق							
Consultant Comments							
Approval Status							
☒ Approved		☐ Rejected					
☐ Approved As Noted		☐ Rejected					
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents							
Contractor		Name :		Signature :		Date :	
							
Consultant		Name :		Signature :		Date :	
							

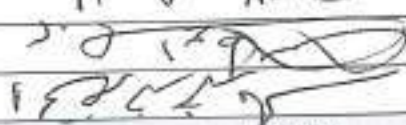
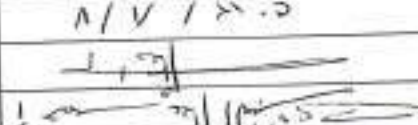
							
CONTRACTOR:		CONSULTANT:		OWNER:		TEST RESULT	
Request Date : 08-08-2023		Submittal No :		EMRB-ENR-LB-045			
Test Request Ref No : EMRB-ENR-LB-045-A		Section / Location :		(AS)			
Test Type		☐ Soil ☐ Concrete ☐ Other		☐ In-Site ☐ Out Site Lab ☐ Others		Ref. Attachments	
Test Location		Description					
		(-) لينة اختبار لينة التربة عن طريق المنحدر الرمي (Sand Cone Test ASTM D1556) (38+740) (في محطة 0.75 متر من سطح) (بما في ذلك)					
Consultant Comments							
Approval Status							
☒ Approved		☐ Resubmit As Noted		☐ Rejected			
☐ Approved As Noted		☐ Rejected		☐ Rejected			
Note: The above works have been approved according to the project specification, approved workshop drawings and contract documents.							
Contractor		Name :		Signature :		Date :	
							
Consultant		Name :		Signature :		Date :	
							

					
CONTRACTOR:		CONSULTANT:		OWNER:	

TEST REQUEST

Request Date : 07-08-2023		Submitted No :		EMB-ENR-LB-045	
Test Request Ref No : EMB-ENR-LB-045-A		Section / location :		(A5)	
Test Type ☐ Concrete ☐ Soil ☐ Other		Test Location ☐ In- ☐ Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
(0.75-) اختبار نسبة الماء الى الرمال (Sand Cone Test ASTM D1556) لطبقة على مستوى من الطريق (38+740) الى (38+700) مسار الجسر متر من محطة					
Consultant Comments					
Approval Status					
☒ Approved		☐ Resubmit As Noted			
☐ B		☐ D		☐ Rejected	

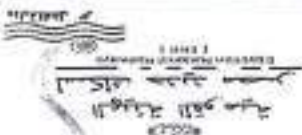
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents

Contractor  Name : Signature : Date : 07-08-2023		Consultant  Name : Signature : Date : 07-08-2023	
--	--	--	--



المركز الدولي للمقاييس والقياسات
أ.د. محمد المصطفى عوف

المركز الدولي للمقاييس والقياسات
(GABRIEL)



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Testing Date: 07-08-2023

Date: 8/8/2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: A-5- From Station (38+700) TO (38+740) Left Side

Level: Embankment (-0.75) from Fenna

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+700	2.254	5.9	2.128	2.182	97.5
38+740	2.256	5.7	2.134	2.182	97.8

The samples Is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Lower Embankment Subgrade Bed.

Tested by Tech: Mohamed Afify

Checked by Lab Engineer

Eng. El Kheider Abotalib

Prepared by D.C: Mohamed Salah

Approved by Project Manager

Eng. Hossam Ismail

CONTRACTOR:		CONSULTANT:		OWNER:	
					
TEST RESULT					
Request Date : 10-08-2023		Submittal No :		EMB-ENR-LB-047	
Test Request Ref No : EMB-ENR-LB-047-A		Section / Location :		(A5)	
Test Type		☐ Concrete ☐ Soil ☐ Other			
Test Location		☐ In-Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
١- نتيجة اختبار نسبة الماء الزائدة من طريق المعروط الوطني (Sand Cone Test ASTM D1556) لطبقة على منسوب من التربة - نتيجة اختبار نسبة الماء الزائدة من طريق المعروط الوطني (38+700) إلى (38+460) مسافة 10.75 متر من مسار الجسر					
Approval Status					
Approved		C		Resubmit As Noted	
Approved As Noted		D		Rejected	
(A) Approved					
Consultant Comments					
Contractor		Consultant			
Name :		Name :			
Signature :		Signature :			
Date :		Date :			

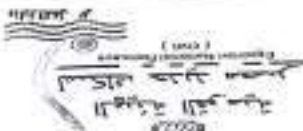
					
CONTRACTOR Name : Signature : Date :		CONSULTANT Name : Signature : Date :		OWNER Name : Signature : Date :	
TEST REQUEST Request Date : 09-08-2023 Test Request Ref No : EMB-ENR-LB-047-A Section / Location : Submittal No : EMB-ENR-LB-047					
Test Type ☐ Concrete ☐ Soil ☐ Other		Test Location ☐ In-Site ☐ Out Site Lab ☐ Others			
Description Ref. Attachments		(0.75-) لطيفة على مسلوب من التربة (38+700) في (38+460) من محطة مياه الجسر اختبار لينة ذلك التربة عن طريق المعروط الرمل (Sand Cone Test ASTM D1556)			
Consultant Comments					
Approved Status ☒ Approved ☐ Approved As Noted ☐ Rejected					
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.					



المرکز الوطني للاستشارات الهندسية
إ.م. محمد المصطفى عوف



المجالس العامة والكليات والهيئات
(GARBLT)



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Testing Date: 09-08-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: A-5- From Station (38+460) TO (38+700) Left Side.

Level: Embankment (-0.75) from Fenna

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+460	2.254	6.4	2.119	2.182	97.1
38+510	2.256	6.6	2.117	2.182	97.0
38+560	2.228	6.0	2.102	2.182	96.3
38+610	2.252	6.2	2.121	2.182	97.2
38+660	2.227	6.4	2.093	2.182	95.9
38+700	2.218	7.0	2.074	2.182	95.0

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Lower Embankment Subgrade Bed

Tested by Tech.: Mohamed Afify

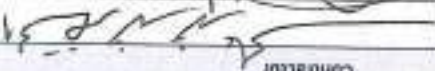
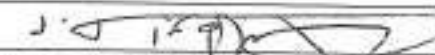
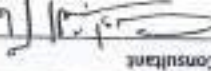
Checked by Lab Engineer

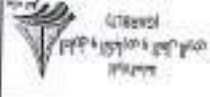
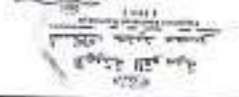
Eng. El Khedr Abotalib

Prepared by D.E. Mohamed Salah

Approved by Project Manager

Eng. Hossam Ismail

 CONTRACTOR	 CONSULTANT	 OWNER	TEST RESULT مشروع تطوير حارة السكن الجديدة على محور / البرقية
Request Date : 13-08-2023			
Test Request Ref No : EMB-ENR-LB-051-A		Section / Location : (A5)	
Submittal No :		EMB-ENR-LB-051	
Test Type ☐ Concrete ☐ Soil ☐ Other			
Test Location ☐ In ☐ Site ☐ Out Site Lab ☐ Others		Description Ref. Attachment	
-) نتيجة اختبار نسبة الماء الزائدة عن طريق المخروط الرطبي (Sand Cone Test ASTM D1556) (لطابقه على مسطح من التربة) (38+700) الي (38+820) محطة (2.00 متر من محطة)			
Consultant Comments			
① Approved			
Approval Status			
☒ Approved		☐ Resubmit As Noted	
☐ B		☐ D	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents			
Contractor Name :  Signature :  Date : 05-08-2023		Consultant Name :  Signature :  Date : 05/08/2023	

							
CONTRACTOR:		CONSULTANT:		OWNER:		Date: 12-08-2023	
TEST REQUEST							
Request Date : 12-08-2023				Submit No :			
Test Request Ref No : EMB-ENR-LB-051-A				Section / Location :			
Test Type		☐ In- ☒ Site		☐ Concret ☒ Soil		☐ Other	
Test Location		☐ In- ☒ Site		☐ Out Site Lab		☐ Others	
Description				Ref. Attachment			
(2.00-) لطيفة على مسؤول من الوزارة اختبار نسبة الرية من طريق المخطط الرابي (Sand Cone Test ASTM D1556) (38+700) الي (38+820) محطة احجار نسبة الرية من طريق المخطط الرابي							
Consultant Comments							
Approved							
Approval Status							
☒ A		Approved		☐ C		Resubmit As Noted	
☐ B		Approved As Noted		☐ D		Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents							
Contractor		Consultant		Date :		Signature :	
Name :		Signature :		Date :		Signature :	

STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556

Testing Date: 12-08-2023

Date: 13/8/2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: A-5- From Station (38+700) TO (38+820).

Level: Embankment (-2.00) from Fenna

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+700	2.235	6.4	2.102	2.182	96.3
38+750	2.256	6.4	2.121	2.182	97.2
38+800	2.228	6.2	2.098	2.182	96.2
38+820	2.252	6.2	2.121	2.182	97.2

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.90$ for Lower Embankment Subgrade Bed.

Tested by Tech.: Mohamed Afify

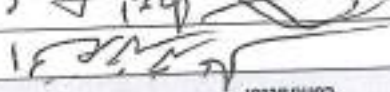
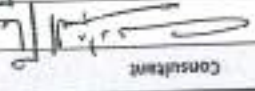
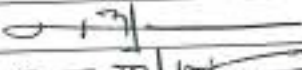
Checked by Lab Engineer

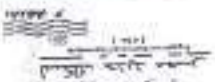
Approved by Project Manager

Prepared by D.C: Mohamed Salah

Eng. El Khedr Abotaleb

Eng. Hossam Ismail

CONTRACTOR: 		CONSULTANT: 		OWNER: 	
TEST RESULT					
Request Date : 14-08-2023		Submittal No :		EMB-ENR-LB-053	
Test Request Ref No : EMB-ENR-LB-053-A		Section / Location :		(AS)	
Test Type		☐ Concrete ☐ Soil ☐ Other			
Test Location		☐ In-Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachement			
1- نتيجة اختبار نسبة الماء الزائدة عن طريق الاختبار (Sand Cone Test ASTM D1556) لطبقة على مستوى من التربة (38+700) إلى (38+820) محطة (1.75 متر من محطة)					
Consultant Comments					
(A) Approved					
Approval Status					
☒ Approved		☐ Resubmit As Noted		☐ Rejected	
☐ B		☐ D		☐ Approved As Noted	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents					
Contractor Name :  Signature :  Date : 13-8-2023		Consultant Name :  Signature :  Date : 13/8/2023			

					
CONTRACTOR:		CONSULTANT:		OWNER:	
مختبر (إنتاج) خط المسكة الحديد على مستوى / جسر TEST REQUEST					
Request Date : 13- 08- 2023		Submital No :		EMB-ENR-LB-053	
Test Request Ref No : EMB-ENR-LB-053-A		Section / Location :		(A5)	
Test Type		☐ Concrete ☐ Soil ☐ Other			
Test Location		☐ In- ☒ Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
(1.75-) لطيفة على مستوى من الطريق (Sand Cone Test ASTM D1556) الرطب (38+700) في محطة (38+820) في طريق المسكة الحديد على مستوى / جسر					
Consultant Comments					
① Approved					
Approval Status					
☒ Approved		☐ C		☐ Resubmit As Noted	
☐ B		☐ D		☐ Rejected	
Note: The above works have been approved according to the project specification, approved workshop drawings and contract documents.					
Contractor		Consultant			
Name :		Name :			
Signature :		Signature :			
Date :		Date :			



॥ श्रीगणेशाय नमः ॥

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ମାଧ୍ୟମିକ
ମାଧ୍ୟମିକ



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556

Testing Date: 13-08-2023

Description of Tested Material:	Sand & Gravel Soil
---------------------------------	--------------------

Description of Test Material

Level: Embankment (-1.75) from Ferma

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+700	2.235	5.9	2.110	2.182	96.7
38+750	2.256	6.2	2.125	2.182	97.4
38+800	2.228	6.0	2.102	2.182	96.3
38+820	2.252	5.7	2.129	2.182	97.6

The samples is COMPLYING with the Project Specifications which allows

The samples is COMPTON with 100 mm diameter and 100 mm height. The minimum limit for compaction ratio $K \geq 0.90$ for Lower Embankment Subgrade Bed.

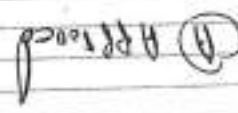
Tested by Tech.: Mohamed Afify

Prepared by D.C. Mohamed Salah

Eng. El Khedr Abotaleb

Approved by Project Manager

Eng. Hossam Ismail

TEST RESULT		Request Date : 14-08-2023		Test Request Ref No : EMB-ENR-LB-054-A	
Submital No :		Section / Location :		(A5)	
EMB-ENR-LB-054		Test Type		☐ Concrete ☐ Soil ☐ Other	
Test Location		☐ In- ☐ Site ☐ Out Site Lab ☐ Others		Ref. Attachement	
-) اختبار نسبة الرية عن طريق المنروط الوطني (Sand Cone Test ASTM D1556) لطبقة على منسوب من اللوحة (0.00 متر من محطة (38+200) الي (38+320))					
Consultant Comments					
					
Approval Status					
Approved		Approved As Noted		Rejected	
C		D		B	
Resubmit As Noted					
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents					
Contractor		Name :		Signature :	
Date :		Date :		Date :	
01/08/2023		01/08/2023		01/08/2023	



TEST REQUEST		طلب اختبار مادة الإسفلت المدمج على الموقع / الموقع	
Request Date : 13-08-2023		Request Ref No : EMB-ENR-LB-054-A	
Submital No :	Section / Location :		
EMB-ENR-LB-054	(A5)		
Test Type		Test Location	
☐ Concrete ☒ Soil ☐ Other	☐ In-Site ☐ Out Site Lab ☐ Others		
Description			
اختبار لمادة الإسفلت المدمج على الموقع (Sand Cone Test ASTM D1556) لطبقة على الطريق (0.00-) (38+320) إلى (38+320) متر من محطة (38+200)			
Ref. Attachment		Consultant Comments	
 OWNER  CONSULTANT  CONTRACTOR			
Approval Status ☒ Approved ☐ Rejected		Approval Status ☐ Approved As Noted ☐ Rejected As Noted	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents			
Contractor Name : <u>Smart</u> Signature : <u>[Signature]</u> Date : <u>13-08-2023</u>		Consultant Name : <u>[Signature]</u> Signature : <u>[Signature]</u> Date : <u>13-08-2023</u>	

STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556



Testing Date: 13-08-2023

Description of Tested Material:	Sand & Gravel Soil
1. σ_1	100 kN/m ²
2. σ_2	100 kN/m ²
3. σ_3	100 kN/m ²
4. σ_4	100 kN/m ²
5. σ_5	100 kN/m ²
6. σ_6	100 kN/m ²
7. σ_7	100 kN/m ²
8. σ_8	100 kN/m ²
9. σ_9	100 kN/m ²
10. σ_{10}	100 kN/m ²
11. σ_{11}	100 kN/m ²
12. σ_{12}	100 kN/m ²
13. σ_{13}	100 kN/m ²
14. σ_{14}	100 kN/m ²
15. σ_{15}	100 kN/m ²
16. σ_{16}	100 kN/m ²
17. σ_{17}	100 kN/m ²
18. σ_{18}	100 kN/m ²
19. σ_{19}	100 kN/m ²
20. σ_{20}	100 kN/m ²
21. σ_{21}	100 kN/m ²
22. σ_{22}	100 kN/m ²
23. σ_{23}	100 kN/m ²
24. σ_{24}	100 kN/m ²
25. σ_{25}	100 kN/m ²
26. σ_{26}	100 kN/m ²
27. σ_{27}	100 kN/m ²
28. σ_{28}	100 kN/m ²
29. σ_{29}	100 kN/m ²
30. σ_{30}	100 kN/m ²

Source and Coordinates of Sample: A-5- From Station (38+200) TO (38+320).

Level: Embankment (-0.00) from Ferra

[illegible]

The samples is COMPLYING with the Project Specifications which allows

The samples is over 100 a minimum limit for compaction ratio $K \geq 0.95$ for Lower Embankment Subgrade Bed.

Tested by Tech.: Mohamed Afify

Prepared by D.C. Mohamed Salah

Checked by Lab Engineer
Eng. El Khedr Abotaleb

Approved by Project Manager

Eng. Hossam Ismail

[illegible]

Contractor Name : <u>شركة</u> Signature : <u>[Signature]</u> Date : <u>04/11/2023</u>		Consultant Name : <u>[Signature]</u> Signature : <u>[Signature]</u> Date : <u>04/11/2023</u>	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.			
Approval Status		Approved As Noted	
☒ A		☐ B	
☐ C		☐ D	
Approved As Noted		Rejected	
Approved			
Consultant Comments			
Request Date : 14-08-2023		Submit No :	
Test Request Ref No : EMB-ENR-LB-056-A		Section / Location :	
Test Type		Ref. Attachment	
☐ Concrete ☒ Soil ☐ Other		Description	
Test Location		Ref. Attachment	
☐ In-Site ☐ Out Site Lab ☐ Others		(1.25-)	
اختبار لينة حصى الرية عن طريق المخروط الريني (Sand Cone Test ASTM D1556) لطبقه على مستوى من التربة (1.25-)			

TEST REQUEST

مرفق الطلب مع الطلب على الموافقة / الترخيص



CONTRACTOR

CONSULTANT

OWNER



السلطة الفلسطينية
الوزارة العامة للتخطيط
إدارة مسح الأراضي

المساحة والبيانات
(GARBLT)



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556

Date: 15/8/2023

Testing Date: 14-08-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: A-5- From Station (38+700) TO (38+820).

Level: Embankment (-1.25) from Fenna

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+700	2.235	6.4	2.102	2.182	96.3
38+750	2.256	6.6	2.117	2.182	97.0
38+800	2.228	6.4	2.094	2.182	96.0
38+820	2.252	6.0	2.125	2.182	97.4

The samples is **COMPLYING** with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.90$ for Lower Embankment Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

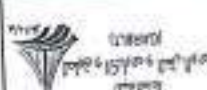
Eng. El Kheider Abotalib

Prepared by D.C: Mohamed Salah

Approved by Project Manager

Eng. Hossam Ismail

TEST RESULT		Request Date : 13-08-2023 Test Request Ref No : EMB-ENR-LB-060-A	
Submittal No : EMB-ENR-LB-060		Section / Location : (A5)	
Test Type ☐ Soil ☐ Concret ☐ Other		Test Location ☐ In- ☐ Site ☐ Out Site Lab ☐ Others	
Description نتج اختبار نسبة دملق الآتية من طريق المخروط الرمي (Sand Cone Test ASTM D1556) لطبقه على مستوى من الآتية (A) (38+700) إلى (38+820) مسافة 0.25 متر من محطة		Ref. Attachment	
Consultant Comments			
(A) Approved			
Approval Status ☒ A Approved ☐ B Approved As Noted ☐ C Resubmit As Noted ☐ D Rejected			
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents			
Contractor Name : Signature : Date : 01-08-2023		Consultant Name : Signature : Date : 01/08/2023	



CONTRACTOR:



CONSULTANT:



مركز الدراسات والبحوث
في مجال التخطيط
(مركز البحوث)



مركز الدراسات والبحوث
في مجال التخطيط
(مركز البحوث)

OWNER:



مركز الدراسات والبحوث في مجال التخطيط / الأبحاث

TEST REQUEST

Request Date : 17-08-2023

Test Request Ref No : EMB-ENR-LB-060-A

Test Type	☐ Concrete ☒ Soil ☐ Other
Test Location	☐ In-Site ☒ Out Site Lab ☐ Others

Description

(0.25-) اختبار نسبة الرية عن طريق المنحدر (Sand Cone Test ASTM D1556) لطبقة على مستوى (38+700) إلى (38+820) محطة من محطة

Ref. Attachment	
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Consultant Comments

① Approved

Approval Status	
Approved	②
Resubmit As Noted	C
Rejected	D
Approved As Noted	B

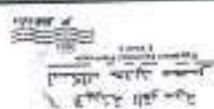
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents

Contractor		Name :	Signature :	Date :
Consultant		Name :	Signature :	Date :

0.25-17-14

0.25-17-14

Approved by Project Manager
Eng. Hossam Ismail

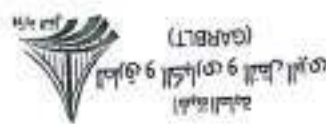
					
OWNER وزارة المياه والكهرباء المملكة العربية السعودية		CONSULTANT شركة (Name)		TEST RESULT مشروع (Project Name) / الموقع (Location)	
Request Date : 20-08-2023 Submittal No : EMB-ENR-LB-061		Section / Location : (AS)		Request Ref No : EMB-ENR-LB-061-A	
Test Type ☐ Concrete ☒ Soil ☐ Other		Test Location ☐ In- ☐ Site ☐ Out Site Lab ☐ Others			
Description Ref. Attachment		(10.00 متر من محطة (38+740) إلى (38+360) لخط أنابيب اختبار مخروط الرمل (Sand Cone Test ASTM D1556) لطبقه في المنسوب من التربة -)			
Consultant Comments					
(1) Approved					
Approval Status Approved As Noted ☐ C Resubmit As Noted ☐ B Approved As Noted ☐ D Rejected ☐					
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.					
Contractor (Signature) (Date)		Consultant (Signature) (Date)			

[illegible]

STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556



Testing Date: 19-08-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: A-5- From Station (38+360) TO (38+740).

Level: Embankment (-0.00) from Fenna

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+360	2.269	5.9	2.142	2.182	98.2
38+410	2.292	6.2	2.159	2.182	98.9
38+460	2.282	5.8	2.158	2.182	98.9
38+510	2.284	6.0	2.156	2.182	98.8
38+560	2.227	6.4	2.093	2.182	95.9
38+610	2.218	6.3	2.086	2.182	95.6
38+660	2.226	6.0	2.100	2.182	96.3
38+710	2.226	5.9	2.102	2.182	96.3
38+740	2.211	6.1	2.085	2.182	95.5

The samples Is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Lower Embankment Subgrade Bed.

Tested by Tech.: Mohamed Afify

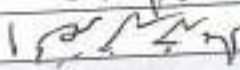
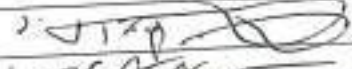
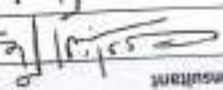
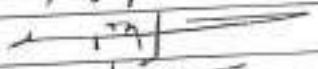
Prepared by D.C: Mohamed Salah

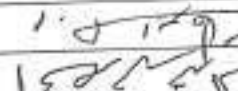
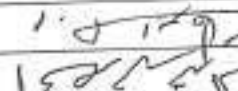
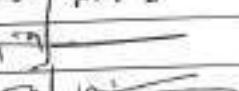
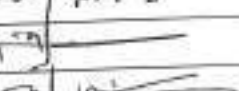
Eng. El Khaledr Abotalib

Checked by Lab Engineer

Approved by Project Manager

Eng. Hossam Ismail

CONTRACTOR: 		CONSULTANT: 		OWNER: 							
TEST RESULT											
Request Date : 21-08-2023		Submittal No :		ENAB-ENR-LB-062							
Test Request Ref No : ENAB-ENR-LB-062-A		Section / Location :		(A5)							
Test Type ☐ Soil ☐ Concrete ☐ Other		Test Location ☐ In-Site ☐ Out Site Lab ☐ Others									
Description		Ref. Attachment									
-) نتيجة اختبار ضغط الماء الزلزالي (Sand Cone Test ASTM D1556) لطبقة على مسطح من التربة (0.00 متر من محطة (38+820) إلى (38+700))											
Consultant Comments											
Approved											
Approval Status <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Approved</td> <td style="width: 50%;">C</td> </tr> <tr> <td>Approved As Noted</td> <td>D</td> </tr> <tr> <td>Rejected</td> <td></td> </tr> </table>						Approved	C	Approved As Noted	D	Rejected	
Approved	C										
Approved As Noted	D										
Rejected											
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents											
Contractor Name :  Signature :  Date : 2023-08-21		Consultant Name :  Signature :  Date : 2023/08/21									

CONTRACTOR: 		CONSULTANT: 		OWNER: 	
TEST REQUEST					
Request Date : 20-08-2023		Submitter No :		EMR-ENR-LB-062	
Test Request Ref No : EMR-ENR-LB-062-A		Section / Location :			
Test Type		☐ Concret ☐ Soil ☐ Other			
Test Location		☐ In- ☒ Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
(0.00-) لطيفة على تنسوبي من (الطريق) (38+700) الى (38+820) محطة مياه من اختبار نسبة دمك التربة عن طريق المنحروط الرشي (Sand Cone Test ASTM D1556)					
Consultant Comments					
Approved					
Approval Status					
☒ A Approved		☐ C Resubmit As Noted			
☐ B Approved As Noted		☐ D Rejected			
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents					
Contractor Name :  Signature :  Date : 20-8-2023		Consultant Name :  Signature :  Date : 20/8/2023			



المركز القومي للمسطحات المائية
إدارة محمد المصطفى عوف



المركز القومي للمسطحات المائية
إدارة محمد المصطفى عوف



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Date: 21/8/2023

Testing Date: 20-08-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: A-5- From Station (38+700) TO (38+820).

Level: Embankment (-0.00) from Fenna

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+700	2.269	6.4	2.134	2.182	97.8
38+750	2.292	6.2	2.159	2.182	98.9
38+800	2.282	6.0	2.154	2.182	98.7
38+820	2.284	6.4	2.147	2.182	98.4

The samples Is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Lower Embankment Subgrade Bed

Tested by Tech.: Mohamed Afify

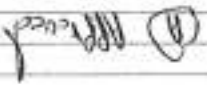
Checked by Lab Engineer

Eng. El Khedr Abotalib

Prepared by D.C: Mohamed Salah

Approved by Project Manager

Eng. Hossam Ismail

CONTRACTOR:		CONSULTANT:		OWNER:	
					
TEST RESULT					
Request Date : 17-08 - 2023		Submital No :		EMB-ENR-LB-0054	
Test Request Ref No : EMB-ENR-LB-0064-A		Section / Location :		(B1)	
Test Type		☐ Concret ☒ Soil ☐ Other			
Test Location		☐ In- ☒ Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
(-) لطيفة على مستوى من الأرضية (Sand Cone Test ASTM D1556) الطريق المخطط الأرضي (42+920) إلى (43+000) بين الجسم القائم لدرجة اختبار لينة لثابتة عن طريق المخطط الأرضي (0.50 متر مكعب)					
Consultant Comments					
					
Approval Status					
☒ Approved		☐ C ☐ Resubmit As Noted			
☐ B ☐ Approved As Noted		☐ D ☐ Rejected			
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents					
Contractor		Consultant			
Name :		Name :			
Signature :		Signature :			
Date :		Date :			

CONTRACTOR: 		CONSULTANT: 		OWNER: 	
TEST REQUEST					
Request Date : 16-08-2023		Submittal No :		EMB-ENR-LB-0064	
Test Request Ref No : EMB-ENR-LB-0064-A		Section / Location :			
Test Type ☐ Concrete ☐ Soil ☐ Other		Test Location ☐ In-Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
(0.50-) اختبار نسبة الماء الزائدة عن طريق الاختبار (Sand Cone Test ASTM D1556) لاختبار على مسلوب في المنطقة (43+000) إلى (42+920) من محطة مياه الجسر الثاني					
Consultant Comments					
(A) Approved					
Approval Status					
☒ A Approved		☐ C Resubmit As Noted		☐ D Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.					
Contractor Name : Signature : Date :		Consultant Name : Signature : Date :			

STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556

Testing Date: 16-08-2023

Date: 17/8/2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: B-1- From Station 42+920 TO 43+000

Level: Embankment (-0.50)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
42+920	2.017	11.9	1.803	1.885	95.7
42+970	2.071	12.5	1.840	1.885	97.6
43+000	2.057	12.4	1.830	1.885	97.1

The samples Is **COMPLYING** with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech: Mohamed Afify

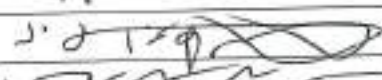
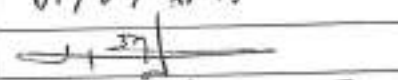
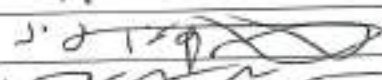
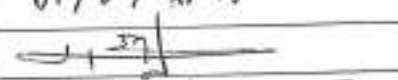
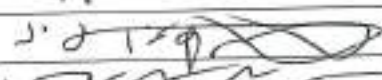
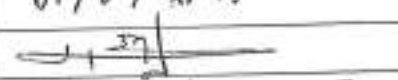
Checked by Lab Engineer

Approved by Project Manager

Prepared by D.C: Mohamed Salah

Eng. El Khedr Abotalib

Eng. Hossam Ismail

Date : ٠٥/٠٨/٢٠٢٣		Signature : 		Name : 	
Date : ٠٥/٠٨/٢٠٢٣		Signature : 		Name : 	
Date : ٠٥/٠٨/٢٠٢٣		Signature : 		Name : 	
Note: The above works have been approved according to the project specification, approved workshop drawings and contract documents.					
Approval Status					
☒ Approved		☐ Approved As Noted		☐ Rejected	
☐ Approved		☐ Approved As Noted		☐ Rejected	
Approved					
Consultant Comments					
Description					
Test Location					
Test Type					
Test Request Ref No : EMB-ENR-LB-0065-A					
Request Date : 18-08-2023					
Submittal No :					
Section / Location : (B1)					
Ref. Attachment					
EMB-ENR-LB-0065 / 7.1					
TEST RESULT					
مختبر الطرق ج.س. السكة الحديدية على محور / البرقي					
					

					
OWNER المملكة العربية السعودية وزارة المياه والكهرباء (Ministry of Water and Electricity - Kingdom of Saudi Arabia)		CONSULTANT شركة استشارات الهندسة (Engineering Consultancy Firm)		CONTRACTOR شركة مقاولات (Contractor Firm)	
مشروع إنشاء محطة معالجة مياه الصرف الصحي / Wastewater Treatment Plant Project					
TEST REQUEST					
Request Date : 17-08-2023		Submit No :		EMB-ENR-LB-0055	
Test Request Ref No : EMB-ENR-LB-0065-A		Section / Location :		(01)	
Test Type ☐ Concrete ☒ Soil ☐ Other		Test Location ☐ In-Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
(0.25-) لطيفة على مستوى من (التركة - 0.25) اختبار نسبة الزرية عن طريق المنحدر (Sand Cone Test ASTM D1556) (التركة - 0.25) من محطة (43+000) إلى (42+920) بين الجسر القديم.					
Consultant Comments					
(A) Approved					
Approval Status					
☒ Approved		☐ Resubmit As Noted		☐ Rejected	
☐ B		☐ D		☐ Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.					
Contractor		Consultant			
Name :		Name :			
Signature :		Signature :			
Date :		Date :			



المركز الوطني للمعايير والتقنية
إدارة معمل الصلابة عوف

المعيار (GAST) لاختبار
الكثافة والكثافة الجافة



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Testing Date: 17-08-2023

Date: 18/8/2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: B-1- From Station 42+920 TO 43+000

Level: Embankment (-0.25)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
42+920	2.165	6.4	2.036	2.090	97.4
42+970	2.151	5.7	2.034	2.090	97.3
43+000	2.168	6.4	2.037	2.090	97.5

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech: Mohamed Afify

Checked by Lab Engineer

Approved by Project Manager

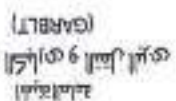
Prepared by D.C: Mohamed Salah

Eng. El-Rashedr Abotalib

Eng. Hossam Ismail



الهيئة العامة للطرق والنقل
إدارة هندسة الطرق



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Testing Date: 20-08-2023

Date: 21/8/2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: B-1- From Station 42+820 TO 43+000

Level: Embankment (-0.00)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
42+820	2.173	6.4	2.043	2.090	97.8
42+870	2.182	5.9	2.060	2.090	98.6
42+920	2.168	6.2	2.042	2.090	97.7
42+970	2.146	6.0	2.025	2.090	96.9
43+000	2.154	6.0	2.032	2.090	97.2

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Approved by Project Manager

Prepared by D.C: Mohamed Salah

Eng. El Khedr Abotalib

Eng. Hossam Ismail



المركز الوطني للمختبرات الهندسية
14/ محمد السادس جولة



المركز الوطني للمختبرات الهندسية
(GARBLT)
للطرق والكبارى والبنى التحتية



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Testing Date: 03-10-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: B-1- From Station 39+920 TO 40+200

Level: Lower Embankment (-0.40)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
39+920	2.069	11.0	1.863	1.940	96.1
39+970	2.036	10.6	1.841	1.940	94.9
40+020	2.081	9.6	1.899	1.940	97.9
40+070	2.041	9.1	1.870	1.940	96.4
40+120	2.079	9.6	1.896	1.940	97.7
40+170	2.049	9.6	1.870	1.940	96.4
40+200	2.060	9.8	1.877	1.940	96.7

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech. Mohamed Afify

Checked by Lab Engineer

Approved by Project Manager

Prepared by D.C: Mohamed Salah

Eng. El Kheir Abotalib

Eng. Hossam Ismail



المركز القومي للمهندسين
البريد الإلكتروني: info@swaft.gov.eg



الهيئة العامة
للحرق والكهرباء
(GARBLT)



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Testing Date: 09-10-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: B-1- From Station 39+920 TO 40+200

Level: Embankment (-0.25)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
39+920	2.184	5.5	2.070	2.090	99.0
39+970	2.161	5.3	2.052	2.090	98.2
40+020	2.151	6.0	2.030	2.090	97.1
40+070	2.140	5.5	2.028	2.090	97.0
40+120	2.147	5.6	2.034	2.090	97.3
40+170	2.143	6.1	2.020	2.090	96.7
40+200	2.167	5.7	2.049	2.090	98.1

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Approved by Project Manager

Prepared by D.C: Mohamed Salah

Eng. ENKhedr Abotalib

Eng. Hossam Ismail



المركز القومي للمختبرات الهندسية
إدارة المختبر القومي
1/ محمد الصافي عوف



إدارة المختبر
القومي والمختبرات
(GARBLT)



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Testing Date: 16-10-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: B-1- From Station 39+560 TO 39+740

Level: Lower Embankment (-1.00)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
39+560	1.529	11.7	1.369	1.492	91.8
39+610	1.554	11.5	1.394	1.492	93.4
39+660	1.564	11.9	1.397	1.492	93.6
39+710	1.578	11.1	1.421	1.492	95.2
39+740	1.538	11.6	1.379	1.492	92.4

The samples Is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Approved by Project Manager

Prepared by D.C: Mohamed Salah

Eng. El Khedr Abotalib

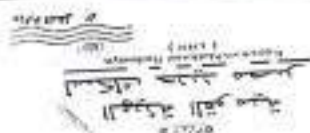
Eng. Hossam Ismail



المركز الوطني للأمن وإدارة الأزمات
إدارة أمن الموانئ



البحرية
القوات المسلحة
(GARBLT)



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556

Date: 25/10/2023

Testing Date: 24-10-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: B-1- From Station 39+740 TO 39+920

Level: Embankment (-0.00)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
39+740	2.166	6.4	2.036	2.090	97.4
39+790	2.155	6.4	2.026	2.090	97.0
39+840	2.139	6.2	2.015	2.090	96.4
39+890	2.161	6.2	2.036	2.090	97.4
39+920	2.127	6.0	2.007	2.090	96.0

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Eng. El Kheir Abotalib

Prepared by D.C: Mohamed Salah

Handwritten signature

Approved by Project Manager
Eng. Hossam Ismail

STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556



(178546)
11/1/06 ମାର୍ଚ୍ଚ ମାସ
କଟକ, ଓଡ଼ିଶା



ה'תשנ"ח
בית דין



Testing Date: 26-08-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: A-5- From Station (38+000) TO (38+200).

Level: Embankment (-0.00) from Fema

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+000	2.269	5.5	2.151	2.182	98.6
38+050	2.292	5.7	2.168	2.182	99.3
38+100	2.282	6.0	2.154	2.182	98.7
38+150	2.284	6.4	2.147	2.182	98.4

The samples Is COMPLYING with the Project Specifications which allows

The samples is control and test samples.

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Approved by Project Manager

Eng. Hossam Ismail

King, El Rhedr Abotalib

Prepared by D.C: Mohamed Salah

STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556
666

Date: 9/10/2023

Testing Date: 08-10-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: A-5- From Station (38+320) TO (38+360).

Level: Embankment (-0.00) from Forma

[illegible]

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Lower Embankment Subgrade Bed.

Tested by Tech.: Mohamud Afify

Checked by Lab Engineer

Approved by Project Manager

Prepared by D.C: Mohamed Salah

Eng. El Khedr Abotalib

Eng. Hossam Ismail

STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
 IN PLACE BY THE SAND-CONE METHOD
 ACCORDING TO ASTM D1556

Testing Date: 30-10-2023

Description of Tested Material: Sand & Gravel Soil

Source and Coordinates of Sample: B-1- From Station 39+560 TO 39+740

Level: Embankment (-0.00)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
39+560	2.160	5.9	2.039	2.090	97.6
39+610	2.153	6.2	2.028	2.090	97.0
39+660	2.159	6.4	2.029	2.090	97.1
39+710	2.150	6.2	2.025	2.090	96.9
39+740	2.156	6.2	2.030	2.090	97.1

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

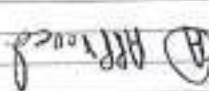
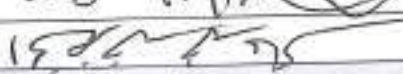
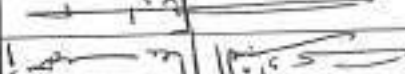
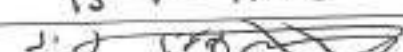
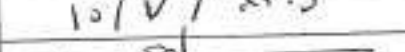
Tested by Tech.: Mohamed Afify
 Checked by Lab Engineer
 Approved by Project Manager

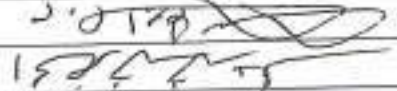
Prepared by D.C: Mohamed Salah

Eng. El Kheider Abotalib

Eng. Hossam Ismail

قرارير الاختيار ات العملية علي طلبة الاساس

					
CONTRACTOR:		CONSULTANT:		OWNER:	
TEST RESULT					
Request Date : 21-08 - 2023		Subtotal No :		EMB-ENR-LB-0066	
Test Request Ref No : EMB-ENR-LB-0066-A		Section / Location :		(01)	
Test Type		☐ Concrete ☐ Soil ☐ Other			
Test Location		☐ In- ☐ Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
نتيجة اختبار لسيارة حديدية الزرقة عن طريق المنحدر (الرملي) (Sand Cone Test ASTM D1556) لطبقة على مستوى من الأرضية (43+800) إلى (43+540) محطة (0.20+)					
Consultant Comments					
					
Approval Status					
☒ A Approved		☐ C Resubmit As Noted		☐ D Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents					
Contractor		Consultant			
Name :					
Signature :					
Date :	2023-08-21	2023/08/21			

							
OWNER		CONSULTANT		OWNER		CONSULTANT	
TEST REQUEST							
Request Date : 20-08-2023				Submital No :			
Test Request Ref No : EMB-ENR-LB-0066-A				Section / Location :			
Test Type				Test Location			
☐ Concrete ☐ Soil ☐ Other				☐ In-Site ☐ Out Site Lab ☐ Others			
Description				Ref. Attachment			
(0.20+) لطيفة على مستوى الطريق (Sand Cone Test ASTM D1556) (43+800) إلى محطة (43+540) من محطة اختبار لاسية التربة عن طريق المنحدر الطريق							
Consultant Comments							
Approval Status							
☒ A Approved		☐ B Approved As Noted		☐ C Resubmit As Noted		☐ D Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents							
Contractor		Name :		Signature :		Date :	
							
		Date :		Signature :		Date :	
							



الهيئة العامة للمياه والكهرباء
الهيئة العامة للمياه والكهرباء

(GABRIEL)

الهيئة العامة للمياه والكهرباء



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Testing Date: 20-08-2023

Date: 21/8/2023

Description of Tested Material: Aggregate

Source and Coordinates of Sample: B-1- From Station 43+540 TO 43+800

Level: Top layer (+0.20)

Point No.	Bulk Density (gm/cm^3)	Moisture Content (%)	In situ Dry Density (gm/cm^3)	Maximum Dry Density (gm/cm^3)	Relative Compaction (%)
43+540	2.367	5.7	2.239	2.317	96.6
43+590	2.391	6.4	2.248	2.317	97.0
43+640	2.363	6.0	2.230	2.317	96.3
43+690	2.395	5.5	2.270	2.317	98.0
43+740	2.385	5.8	2.255	2.317	97.3
43+800	2.154	6.7	2.018	2.317	87.1

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Approved by Project Manager

Prepared by D.C: Mohamed Salah

Eng. El Khedr Abotalib

Eng. Hossam Ismail

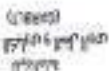
REACTOR



CONSULTANT



مركز الدراسات والبحوث في الموارد المائية والكهرباء
Ministry of Water Resources and Electricity



الوزارة العامة للتخطيط والتنمية الاقتصادية
Ministry of Planning and Economic Development

OWNER



الوزارة العامة للزراعة والتنمية الريفية
Ministry of Agriculture and Rural Development

ملحق (الرجوع حسب المصطلح المحدد في الملحق) / الوردية

TEST RESULT

Request Date : 09-08 - 2023

Test Request Ref No : EMB-ENR-LB-0057-A

Section / Location :

(B3)

Other ☐

Soil ☐

Concret ☐

Test Type

Others ☐

Out Site Lab ☐

Site ☐

Test Location

Ref. Attachment

Description :

نتيجة اختبار لينة حمال التربة عن طريق المنحدر (طريق) (ASTM D1556) (لينة على منحدر من التربة) (Sand Cone Test ASTM D1556) (طريق المنحدر) (طريق) (43+300) (بني الجسم الثاني) (0.20+) متر محطة

Consultant Comments

④ Approved

Approval Status

Approved

C

Resubmit As Noted

Approved As Noted

D

Rejected

Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents

Contractor

Name :

Signature :

Date :

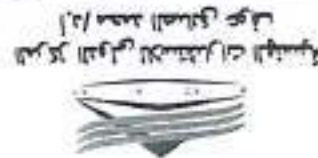
C-02-A-9

Consultant

Signature :

C-02 / A / 9

TEST REQUEST		مشروع لإصلاح حزام السكة الحديد على محور / الإريش	
Request Date : 08-08-2023		Submital No :	
Test Request Ref No : EMB-ENR-LB-0057-A		Section / location :	
Test Type		Ref. Attachment	
☐ Concrete ☐ Soil ☐ Other		☐ In-Site ☐ Out Site Lab ☐ Others	
Description		(0.20+) لطيفة على مستوى من الطريق (Sand Cone Test ASTM D1556) الرابطة (43+300) إلى (43+080) في (جسر القاسم) من محطة اختبار لسكة حديدية على طريق المشروع	
Consultant Comments			
11 Approved			
Approval Status			
A Approved		C Resubmit As Noted	
B Approved As Noted		D Rejected	
Note: The above works have been approved according to the project specification, approved workshop drawings and contract documents			
Contractor		Consultant	
Name :		Name :	
Signature :		Signature :	
Date :		Date :	



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556

Date: 9/8/2023

Testing Date: 08-08-2023

Description of Tested Material: Aggregate

Source and Coordinates of Sample: B-1- From Station 43+080 TO 43+300

Level: Top layer (+0.20)

Point No.	Bulk Density (gm/cm^3)	Moisture Content (%)	In situ Dry Density (gm/cm^3)	Maximum Dry Density (gm/cm^3)	Relative Compaction (%)
43+080	2.367	5.9	2.234	2.317	96.4
43+130	2.391	5.9	2.257	2.317	97.4
43+180	2.363	6.2	2.226	2.317	96.1
43+230	2.395	6.0	2.261	2.317	97.6
43+300	2.385	6.0	2.250	2.317	97.1

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Eng. El Khedr Abotalib

Prepared by D.C: Mohamed Salah

Approved by Project Manager

Eng. Hossam Ismail

STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556

Date: 27/9/2023

Testing Date: 26-09-2023

Description of Tested Material: Aggregate

Source and Coordinates of Sample: B-1- From Station 43+960 TO 44+360

Level: Top layer (+0.20)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
43+960	2.395	5.7	2.265	2.317	97.8
44+010	2.391	6.4	2.248	2.317	97.0
44+060	2.363	6.0	2.230	2.317	96.3
44+110	2.395	5.5	2.270	2.317	98.0
44+160	2.385	5.8	2.255	2.317	97.3
44+210	2.385	6.7	2.235	2.317	96.4
44+260	2.370	5.7	2.242	2.317	96.7
44+310	2.387	6.8	2.236	2.317	96.5
44+360	2.380	6.1	2.244	2.317	96.9

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech.: Mohamed Afify Checked by Lab Engineer Approved by Project Manager

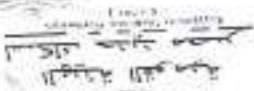
Prepared by D.C: Mohamed Salah Eng. El Khedr Abotalib Eng. Hossem Ismail



الهيئة العامة للغذاء والدواء
الجمهورية العربية السورية



(GABRIEL)



**STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556**

Testing Date: 27-09-2023

Description of Tested Material: Aggregate

Source and Coordinates of Sample: B-1- From Station 43+540 TO 43+960

Level: Top layer (+0.20)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
43+540	2.384	5.9	2.250	2.317	97.1
43+590	2.397	6.4	2.254	2.317	97.3
43+640	2.363	6.6	2.217	2.317	95.7
43+690	2.395	6.4	2.252	2.317	97.2
43+740	2.385	6.0	2.250	2.317	97.1
43+790	2.385	6.3	2.244	2.317	96.8
43+840	2.370	6.4	2.228	2.317	96.2
43+890	2.387	6.8	2.236	2.317	96.5
43+960	2.380	6.9	2.226	2.317	96.1

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Approved by Project Manager

Prepared by D.C: Mohamed Salah

Eng. El Khedr Abotalib

Eng. Hossam Ismail

STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556

Testing Date: 30-09-2023

Aggregate	Description of Tested Material:
1	100% virgin aggregate
2	100% recycled aggregate
3	50% virgin aggregate, 50% recycled aggregate
4	25% virgin aggregate, 75% recycled aggregate
5	75% virgin aggregate, 25% recycled aggregate

Source and Coordinates of Sample: B-1- From Station (43+300) TO (43+460)

Level: Top layer (+0.20)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
43+300	2.375	5.7	2.247	2.317	97.0
43+350	2.397	5.7	2.267	2.317	97.8
43+400	2.391	5.5	2.265	2.317	97.8
43+460	2.395	6.0	2.261	2.317	97.6

The samples is COMPLYING with the Project Specifications which allows

A minimum limit for compaction ratio $K \geq 0.95$ for Embankment Under Subgrade Bed

Tested by Tech: Mohammed Afify

Checked by Lab Engineer

Approved by Project Manager

~~Prepared by D.C: Mohamed Salah~~

Eng. El Khedr Abotaleb

Eng. Hossein Ismail



الهيئة العامة للغذاء والدواء
البحرين



الهيئة العامة للغذاء والدواء
البحرين



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556

Date: 9/10/2023

Testing Date: 08-10-2023

Description of Tested Material: Aggregate

Source and Coordinates of Sample: A-5- From Station (38+360) TO (38+820).

Level: Top Layer Subgrade (+0.20)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+360	2.400	6.4	2.256	2.300	98.1
38+410	2.415	6.2	2.275	2.300	98.9
38+460	2.377	5.8	2.248	2.300	97.7
38+510	2.376	6.0	2.243	2.300	97.5
38+560	2.372	6.2	2.233	2.300	97.1
38+610	2.393	5.9	2.260	2.300	98.3
38+660	2.403	6.2	2.264	2.300	98.4
38+710	2.392	6.3	2.250	2.300	97.8
38+760	2.392	6.1	2.255	2.300	98.1
38+820	2.385	6.5	2.240	2.300	97.4

The samples is COMPLYING with the Project Specifications which allows a minimum limit for compaction ratio $K \geq 0.95$ for Top Layer Subgrade Bed.

Tested by Tech.: Mohamed Afify
Checked by Lab Engineer
Eng. El Khedr Abotalib
Prepared by D.C: Mohamed Salah
Approved by Project Manager
Eng. Hosam Ismail

[illegible]

CE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556



STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL
IN PLACE BY THE SAND-CONE METHOD
ACCORDING TO ASTM D1556

Testing Date: 24-08-2023

Date: 25/8/2023

Description of Tested Material: Aggregate

Source and Coordinates of Sample: A-5- From Station (38+200) TO (38+320).

Level: Top Layer Subgrade (+0.20)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+200	2.400	5.7	2.270	2.300	98.7
38+250	2.400	5.9	2.265	2.300	98.5
38+300	2.377	5.8	2.248	2.300	97.7
38+320	2.391	6.0	2.257	2.300	98.1

The samples Is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Lower Embankment Subgrade Bed

Tested by Tech.: Mohamed Afify

Checked by Lab Engineer

Approved by Project Manager

Prepared by D.C. Mohamed Salah

Eng. El Khedr Abotalib

Eng. Hossam Ismail

STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL

IN PLACE BY THE SAND-CONE METHOD

ACCORDING TO ASTM D1556



السلطة العامة
للحرق و الكباري و البنى التحتية
(GARBLT)



Date: 25/8/2023

Testing Date: 24-08-2023

Description of Tested Material: Aggregate

Source and Coordinates of Sample: A-5- From Station (38+360) TO (38+760).

Level: Top Layer Subgrade (+0.20)

Point No.	Bulk Density (gm/cm ³)	Moisture Content (%)	In situ Dry Density (gm/cm ³)	Maximum Dry Density (gm/cm ³)	Relative Compaction (%)
38+360	2.400	6.4	2.256	2.300	98.1
38+410	2.415	6.2	2.275	2.300	98.9
38+460	2.377	6.0	2.243	2.300	97.5
38+510	2.416	6.4	2.271	2.300	98.7
38+560	2.348	5.6	2.224	2.300	96.7
38+610	2.393	7.0	2.237	2.300	97.3
38+660	2.403	6.2	2.264	2.300	98.4
38+710	2.392	6.3	2.250	2.300	97.8
38+760	2.392	6.1	2.255	2.300	98.1

The samples is COMPLYING with the Project Specifications which allows

a minimum limit for compaction ratio $K \geq 0.95$ for Lower Embankment Subgrade Bed.

Approved by Project Manager

Checked by Lab Engineer

Tested by Tech.: Mohamed Afify

Eng. El Khedr Abotalib

Prepared by D.C: Mohamed Salah

Eng. Hossam Ismail

تقارير الاختبارات العملية علي صلاحيات الواد والأثرية

							
OWNER:		CONSULTANT:		CONTRACTOR:			
مشروع لإنتاج مياه الشرب على المنحدر / الريفي TEST RESULT							
Request Date : 08-05-2023		Submital No :		Request Ref No : EMB-ENR-LB-006-A			
		Section / Location :					
Test Type		☐ Soil ☐ Other		Test Location		☐ In- ☐ Site ☐ Out Site Lab ☐ Others	
Description		Ref. Attachment					
(43+500) عند (43+900) أي (40+460) من (Stock Pile) الجريد من الجريد من (43+500)							
تجربة اختبار صلاحية من الجريد من (43+500)							
Consultant Comments							
Approved							
Approval Status							
Approved		C		Resubmit As Noted			
Approved As Noted		D		Rejected			
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents							
Name :		Signature :		Date :			
Contractor		Consultant		C.O.C / 7 / 1			

TEST REQUEST		مطلب اختبار / Request									
Request Date : 03-06-2023		Subject No :									
Test Request Ref No : EMB-ENR-LB-006-A		Section / Location :									
Test Type : ☐ Soil ☐ Concrete ☐ Other Test Location : ☐ In-Situ ☐ Out Site Lab ☐ Others		Ref. Attachments									
Description اختبار صلاية من التربة (Stock Pile) من (40+460) إلى (43+500) على محور (43+500)											
Consultant Comments											
R Approved											
Approval Status <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;">A</td> <td style="width: 40%;">Approved</td> <td style="width: 20%; text-align: center;">C</td> <td style="width: 20%;">Resubmit as noted</td> </tr> <tr> <td style="text-align: center;">B</td> <td>Approved as noted</td> <td style="text-align: center;">D</td> <td>Rejected</td> </tr> </table>				A	Approved	C	Resubmit as noted	B	Approved as noted	D	Rejected
A	Approved	C	Resubmit as noted								
B	Approved as noted	D	Rejected								
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents											
Contractor		Consultant									
Name :		Name :									
Signature :		Signature :									
Date :		Date :									



إدارة المياه والكهرباء
(GARBLT)



**PARTICLE SIZE ANALYSIS
OF SOILS AND MATERIALS FINER THAN # 200 Sieve
AASHTO T 27 & ASTM C 136**

Date: 08/06/2023

Project: جدانج السكة الحديدية على مستوى / الخرب / الخرب

Sample delivery date: 03/06/2023

Sample Identification No. : Sample No.06 (Aggregate)

Source of sample: Section B1 Stock pile at St (43+500)

Level (m) : Stock Pile

Classification According to AASHTO:

Type I - Grade B

Percentage of materials finer than # 200:

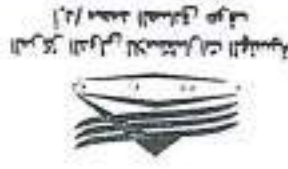
11.0%

Sieve	Opening	Percentage	Notes
No.	(mm)	Passing %	
3 in.	75	100.0	
2.5 in.	63.5	100.0	
2 in.	50	100.0	
1.5 in.	38	92.3	
1 in.	25	57.5	
3/4 in.	19	55.6	
1/2 in.	12.5	40.7	
3/8 in.	9.5	40.2	
No. 4	4.75	34.0	
No. 10	2.0	24.4	
No. 40	0.425	14.6	
No. 200	0.075	11.0	

Notes:-

Prepared by : Eng.El Khedr Abu Talib

Reviewed by : Eng.Hossam Ismail



السلطة الفلسطينية
المياه والكهرباء
(GABRIEL)



LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS
ACCORDING TO ASTM D4318

Project: السكة الحديد على محور الخليل - القدس
Date: 08/06/2023

Sample delivery date: 03/06/2023
Sample Identification No.: Sample No.06 (Aggregate)
Source of sample: Section B1 Stock pile at SI (43+500)
Level (m): Stock Pile
Classification According to AASHTO: Type I - Grade B

Sample Identification No.	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
Sample No.06 (Aggregate)	N.P.	N.P.	N.P.

Notes:-

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hossam Ismail

16-10

10

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hossam Ismail

Notes:-

Sample Identification No.	Aggregate Abrasion Ratio Value
Sample No.06 (Aggregate)	33%

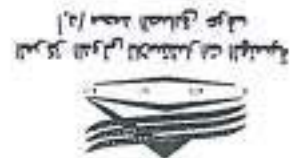
Project: خط أنفاق المترو على مستوى / الترميز : 08/06/2023
Sample delivery date: 03/06/2023
Sample Identification No. : Sample No.06 (Aggregate)
Source of sample: Section B1 Stock pile at St (43+500)
Level (m) : Stock Pile
Classification According to AASHTO: Type I - Grade B

LOS ANGELES ABRASION VALUE OF AGGREGATE
ACCORDING TO AASHTO T 96-02(2006)



إدارة الطرق والكباري والجسور (GARBLT)



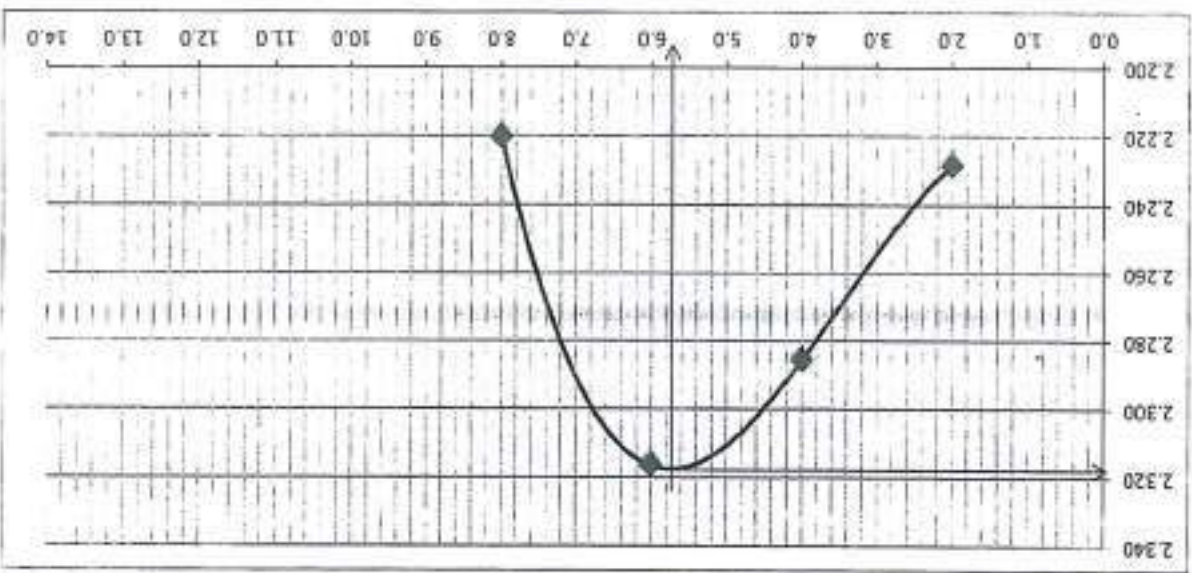


MOISTURE DENSITY RELATIONSHIP OF SOIL
ACCORDING TO ASTM D 1557

Project: دراسة المسح الجيوتقني لمشاريع الطرق / الجيوتقني
Date: 6/8/2023

Sample delivery date: 03/06/2023
Sample Identification No.:
Sample No.06 (Aggregate)
Source of sample: Section B1 Stock pile at St (43+500)
Level (m): Stock Pile

Wet Unit Weight, g/cm ³	Water Content, %	Dry Unit Weight, g/cm ³
2.273	2.0	2.229
2.377	4.0	2.286
2.456	6.0	2.317
2.398	8.0	2.220



Result (s):

- 1- Maximum dry density = 2.317 g/cm³
- 2- Optimum moisture content = 5.70 %

Note (s):

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hosam Ismail

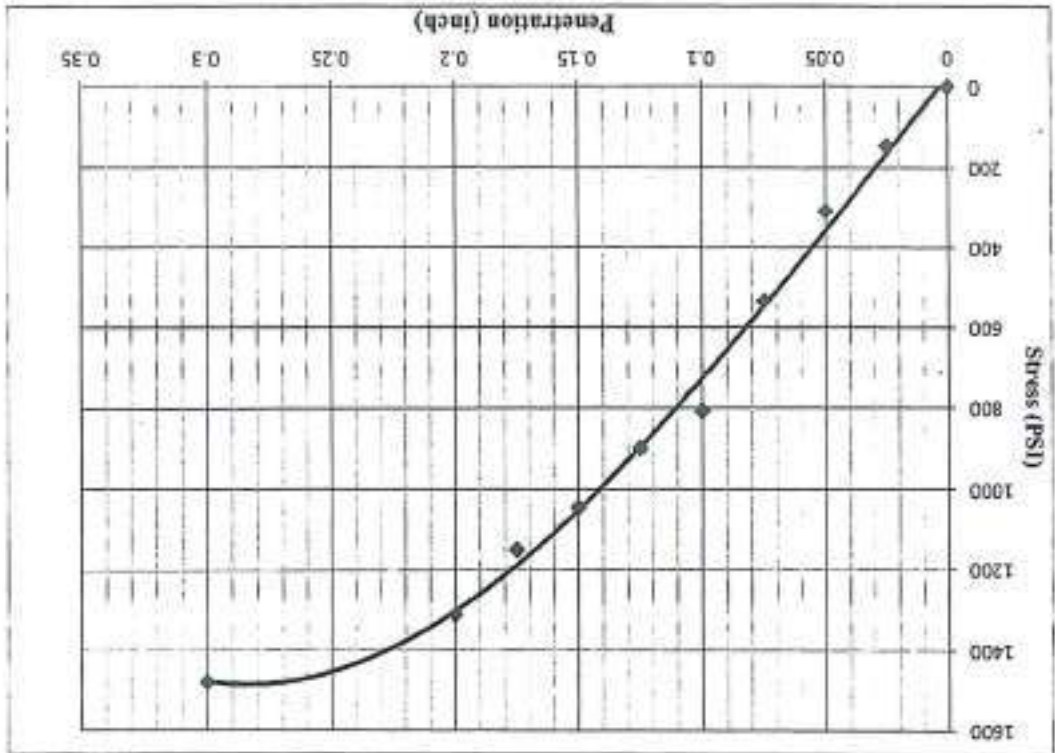
Reviewed by : Eng. Hossam Ismail

Prepared by : Eng. El Khedr Abu Talib

Note (s):

CBR at 0.1 Inch = 80.6 %
CBR at 0.2 Inch = 87.4 %

Result (s):



Level (m) : Stock Pile

Source of sample: Section B1 Stock pile at St (43+500)

Sample Identification No. : Sample No.06 (Aggregate)

Sample delivery date: 03/06/2023

Project: طريق مصر - السويس / السويس / مصر
Date: 6/8/2023

CBR OF LABORATORY-COMPACTED SOILS ACCORDING TO ASTM D 1883



الهيئة العامة للنقل
(GABRIEL)



Name :		Contractor		Name :		Consultant	
Signature :		[Signature]		Signature :		[Signature]	
Date :		2022-12-06		Date :		2022-12-06	

Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents

Approval Status	
A	Approved
B	Approved As Noted
C	Resubmit As Noted
D	Rejected

A Approved

Consultant Comments	

Request Date : 06-12-2022		Submital No :		EMB-ENR-LB-003 59	
Test Request Ref No : EMB-ENR-LB-003-A		Section / Location :		(B1)	
Test Type		☐ Concrete ☐ Soil ☐ Other		☐ In-Site ☐ Out Site Lab ☐ Others	
Description		(43+820) الي (43+320) محطة (0.40) متر من محطة (43+820) لينة اختبار صلابة قاع الحفر على مستوى			
Ref. Attachment					

TEST RESULT

مشروع ارباج جاز المسكة الجديري على مستوى / الارض

 CONTRACTOR:	 CONSULTANT:	 OWNER:
--	---	---

CONTRACTOR		CONSULTANT		OWNER	
					
TEST REQUEST					
Request Date : 01.12.2022					
Test Request Ref No : EMB-ENR-LB-003-A		Section / Location :			
Test Type		☐ Soil ☐ Other			
Test Location		☐ In- ☐ Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
اختبار صلابة قاع الحفر على منسوب (0.40-) متر من محطة (43+320) الي (43+820) اختبار صلابة قاع الحفر على منسوب (0.40-) متر من محطة (43+320) الي (43+820)					
Consultant Comments					
Approval Status					
A		Approved		C	
B		Approved As Noted		D	
		Rejected			
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents					
Contractor		Consultant		Owner	
Name :		Name :		Name :	
Signature :		Signature :		Signature :	
Date :		Date :		Date :	



الهيئة العامة
للإحصاء والبيانات
(GARBLT)



PARTICLE SIZE ANALYSIS
OF SOILS AND MATERIALS FINER THAN # 200 Sieve
ASTM D - 422

Date: 04/12/2022

Project: الجسور الحديثة على منحدر / الروتشي

Sample delivery date: 01/12/2022

Sample Identification No.: Sample No. 3

Source of sample: Section B1 at St (43+320) to (43+820) Slab at St (43+400) & (43+700).

Level (m): F.L (-0.40).

Classification According to AASHTO:

A-2-4

Percentage of materials finer than # 200:

16.4%

Sieve	Opening	Percentage	Notes
No.	(mm)	Passing %	
3 in.	75	100.0	
2.5 in.	63.5	100.0	
2 in.	50	100.0	
1.5 in.	38	99.5	
1 in.	25	99.5	
3/4 in.	19	99.4	
3/8 in.	9.5	99.2	
No. 4	4.75	98.7	
No. 10	2.0	98.1	
No. 40	0.425	68.3	
No. 200	0.075	16.4	

Notes:-

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hossam Ismail

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS
ACCORDING TO ASTM D4318



إدارة
 الأراضي والبنية التحتية
 (GARBLT)



Project: خط زواياج السكة الحديد على مازهور / البروكلي Date: 04/12/2022

Sample delivery date: 01/12/2022

Sample Identification No.: Sample No. 3

Source of sample: Section B1 at St (43+320) to (43+820) Slab at St (43+400) & (43+700).

Level (m): F.L (-0.40).

Classification According to AASHTO: A-2-4

Sample Identification No.	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
Sample No. 3	28	23	5

Notes:-

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hossem Ismail

Handwritten signature

MOISTURE DENSITY RELATIONSHIP OF SOIL

ACCORDING TO ASTM D 1557



Project: كذا مشروع السكة الحديدية الجديدة / الرافديني

Date: 12/4/2022

Sample delivery date: 01/12/2022

Sample Identification No.:

Sample No. 3

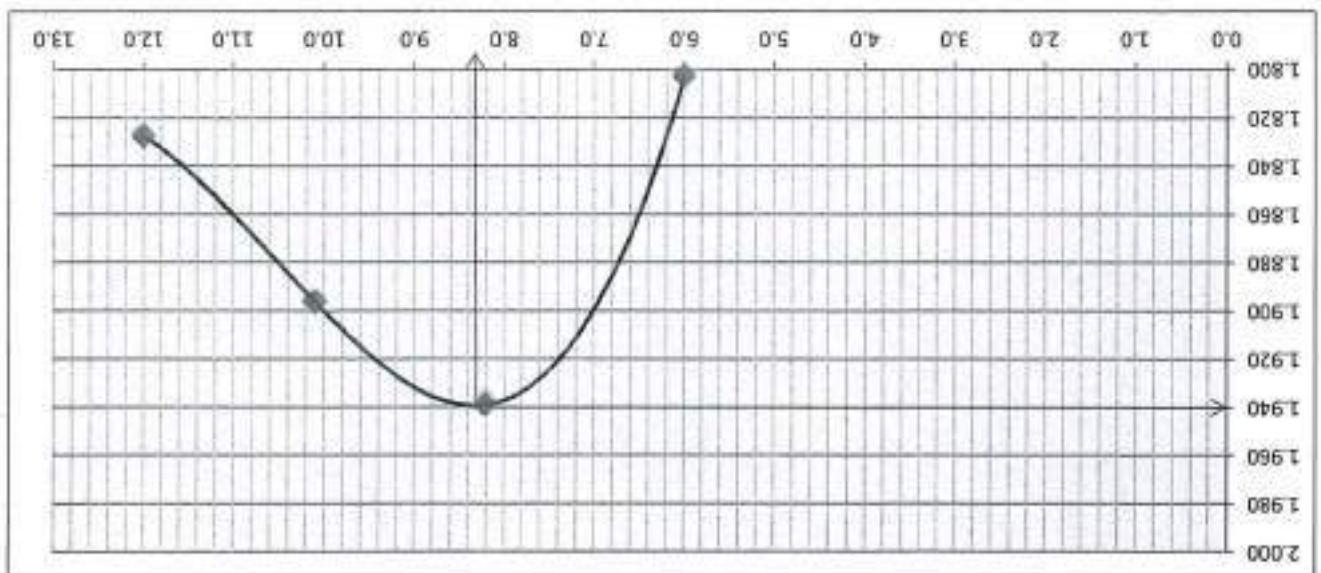
Source of sample:

Section B1 at St (43+320) to (43+820) Slab at St (43+400) & (43+700).

Level (m):

F.L (-0.40).

Wet Unit Weight, g/cm ³	Water Content, %	Dry Unit Weight, g/cm ³
1.911	6.0	1.803
2.098	8.2	1.939
2.088	10.1	1.896
2.047	12.0	1.828



Result (s):

1- Maximum dry density = 1.940 t/m³
2- Optimum moisture content = 8.30 %

Note (s):

Prepared by : Eng. El Kheir Abu Talib

Reviewed by : Eng. Hossam Ismail

Reviewed by : Eng. Hossam Ismail

Prepared by : Eng. El Khedr Abu Talib

Note (s):

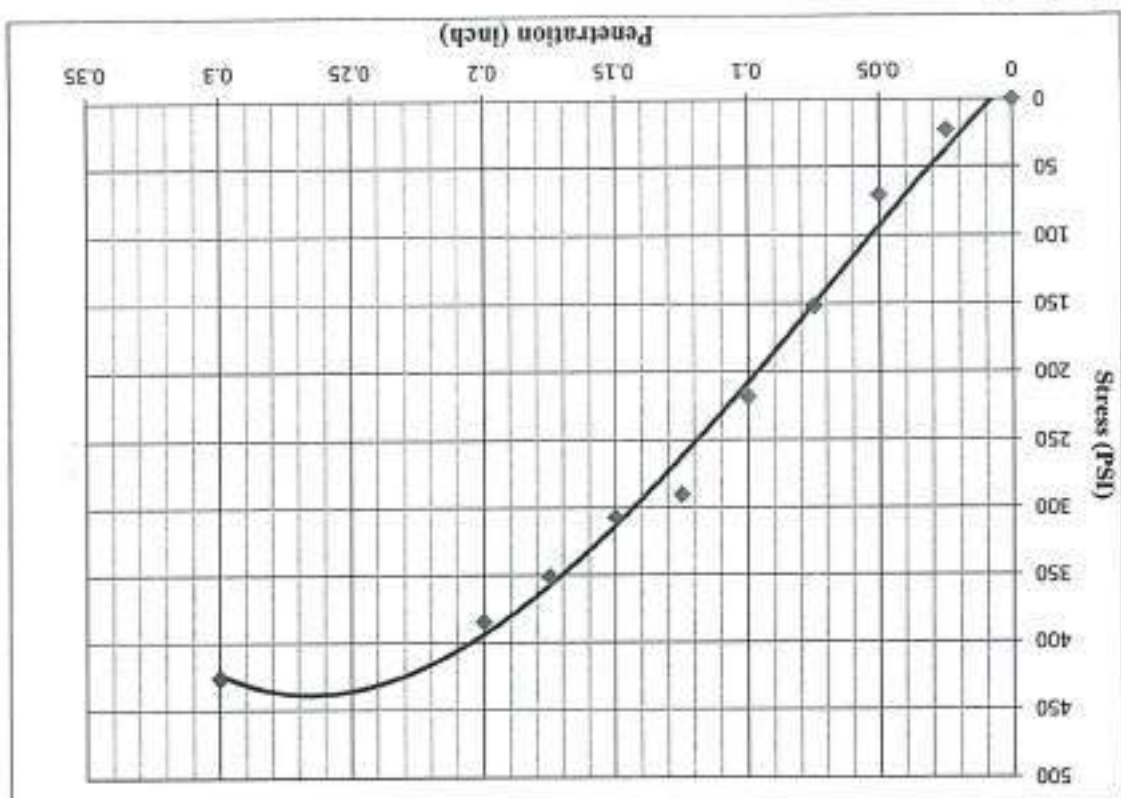
CBR at 0.1 Inch =

21.8 %

CBR at 0.2 Inch =

25.7 %

Result (s):



Sample No. 2 F.L. (-0.40).

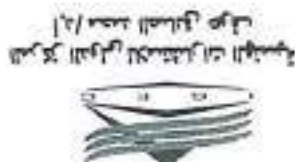
3/12/2022 Section B1 at St (43+320) to (43+820) Slab at St (43+400) & (43+71)

Sample Identification No. : Sample No. 3

Sample delivery date: 01/12/2022

Project: طرقات السكة الحديد على محور /الرومكى / Date: 12/4/2022

CBR OF LABORATORY-COMPACTED SOILS ACCORDING TO ASTM D 1883



إدارة الطرق والكبارى والنقل النهري (GARBLT)



							
CONTRACTOR:		CONSULTANT:		OWNER:		TEST RESULT	
Request Date : 03-02-2023		Submital No :		EMB-ENR-LB-005		40	
Test Request Ref No : EMB-ENR-LB-005-A		Section / Location :		(A3)		(A3)	
Test Type		☐ Concrete ☐ Soil ☐ Other		Test Location		☐ In- ☐ Site ☐ Out Site Lab ☐ Others	
Description		Ref. Attachement		نتيجة اختبار صلاحية الرية على المنسوب (0.25-) من محطة (40+760) إلى (40+920)			
Consultant Comments							
Ⓑ Approved As Noted تمت الموافقة على النتائج على الموقع (10) من الرية							
Approval Status							
A		Approved		C		Resubmit As Noted	
B		Approved As Noted		D		Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents							
Name :		Name :		Name :		Name :	
Signature :		Signature :		Signature :		Signature :	
Date :		Date :		Date :		Date :	

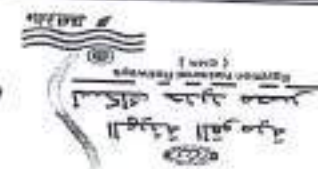
Date :		04-04-2023	
Signature :		[Signature]	
Name :		[Name]	
Consultant		Contractor	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.			
Approved As Noted		Approved	
Rejected		Resubmit As Noted	
Approval Status			
① Approved			
Consultant Comments			
Ref. Attachment		Description	
(B1)		اختبار صلابة الكرة على منسوب (0.25) من عمق (40+760) إلى (40+920)	
Test Location		☐ In- ☒ Site ☐ Out Site Lab ☐ Others	
Test Type		☐ Concret ☒ Soil ☐ Other	
Request Ref No : EMB-ENR-LB-005-A		Section / Location :	
Request Date : 02 - 02 - 2023		Submital No :	
EMB-ENR-LB-005		EMB-ENR-LB-005	
TEST REQUEST			
مختبر / نوع جرد المسكة المختبر من مختبر / الموقع			
			
			



الهيئة العامة للغذاء والدواء
الهيئة العامة للغذاء والدواء
الهيئة العامة للغذاء والدواء



إدارة الصحة العامة
(GARBLT)
إدارة الصحة العامة



PARTICLE SIZE ANALYSIS OF SOILS AND MATERIALS FINER THAN # 200 Sieve ASTM D - 422

Date: 03/02/2022

Project: خط انزلاج المسكة الجديد على منحدر الرومي / الرومي

Sample delivery date: 02/02/2022

Sample Identification No. : Sample No. 5

Source of sample: B1 at St (40+760) to (40+920) Stock at St (41+000) - Clay Minerals

Level (m) : -0.25

Classification According to AASHTO:

Percentage of materials finer than # 200:

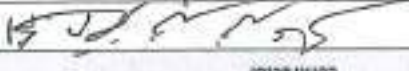
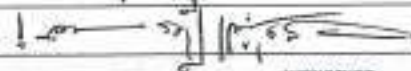
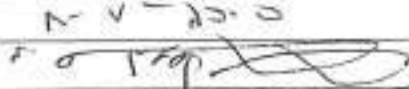
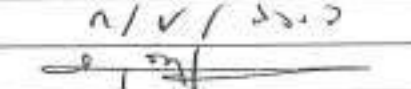
Sieve	No.	Opening (mm)	Percentage	Description of Tested Material
	3 in.	75		Soil Classified as Clay Minerals
	2.5 in.	63.5		
	2 in.	50		
	1.5 in.	38		
	1 in.	25		
	3/4 in.	19		
	3/8 in.	9.5		
	No. 4	4.75		
	No. 10	2.0		
	No. 40	0.425		
	No. 200	0.075		

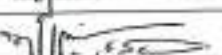
Notes:-

1- Not suitable for using because it is Rubbish Materials.

Prepared by : Eng. El Khedr Abu Talib

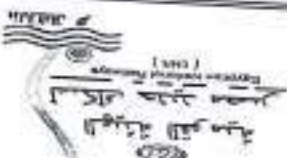
Reviewed by : Eng. Hossam Ismail

							
مشاريع البنية التحتية / البنية التحتية / البنية التحتية							
TEST RESULT							
Request Date : 07-08-2023		Submission No :		EMB-ENR-LB-010			
Test Request Ref No : EMB-ENR-LB-010-A				Section / Location :		(81) (41)	
Test Type		☐ Concrete ☒ Soil		☐ Other			
Test Location		☐ In- ☒ Site		☐ Out Site Lab ☐ Others			
Description		(43+000) الى (42+820) متر من (0.00-) المنسوب على الطينينة الارضى (تربة صلبة)					
Ref. Attachment							
Consultant Comments							
الموافق 05/08/2023 الموافق 05/08/2023							
Approval Status							
☒ A Approved		☐ C Resubmit As Noted		☐ D Rejected			
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.							
Contractor		Name :		Signature :		Date :	
							
							

					
المشروع: (تدريج) حزام السكك الحديدية على محور / الدمام		TEST REQUEST			
Request Date : 02 - 08 - 2023		Submital No :		EMB-ENR-LB-010	
Test Request Ref No : EMB-ENR-LB-010-A		Section / Location :		(B1)	
Test Type		☐ Concrete ☐ Soil ☐ Other			
Test Location		☐ In-Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
الحزام حزام السكك الحديدية على محور (0.00-1) (42+820) إلى (43+000)					
Consultant Comments					
Approved					
Approval Status					
Approved		C		Resubmit As Noted	
Approved As Noted		D		Rejected	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents					
Contractor		Consultant			
Name : 		Name : 			
Signature :		Signature :			
Date :		Date :			



المملكة العربية السعودية
الطرق والكباري والميناء
(GARBLT)



**PARTICLE SIZE ANALYSIS
OF SOILS AND MATERIALS FINER THAN # 200 Sieve**
ASTM D - 422

Project: الطرق الجديدة على محور / الرويفي
Sample delivery date: 02/08/2023
Sample Identification No.: Sample No. 10

Source of sample: Section B1 at S1 from (42+820) to (43+000) Slab at S1 (42+900) and (43+000)

Level (m): (-0.00) m Upper Embankment

Classification According to AASHTO:

A-3

Percentage of materials finer than # 200:

9.3%

Sieve	Opening	No.	(mm)	Percentage	Passing %	Notes
3 in.	75	100.0				
2.5 in.	63.5	100.0				
2 in.	50	100.0				
1.5 in.	38	98.9				
1 in.	25	97.6				
3/4 in.	19	95.7				
1/2 in.	12.5	93.6				
3/8 in.	9.5	91.4				
No. 4	4.75	86.4				
No. 10	2.0	81.5				
No. 40	0.425	62.9				
No. 200	0.075	9.3				

Notes:-

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hossam Ismail



الهيئة العامة
للرؤى والكوارى والنقل البحرى
(GARBLT)



LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS
ACCORDING TO ASTM D4318

Date: 07/08/2023

Project: الطرق السريعة الجديدة على طريق / الطريق الجديد

Sample delivery date: 02/08/2023

Sample Identification No. : Sample No. 10

Source of sample: Section B1 at St from (42+820) to (43+000) Slab at st (42+900) and (43+000)

Level (m) : (-0.00) m Upper Empankment

Classification According to AASHTO:

A-3

Sample Identification No.	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
Sample No. 10	N.P.	N.P.	N.P.

Notes:-

Prepared by : Eng. El Khedr Abu Talib

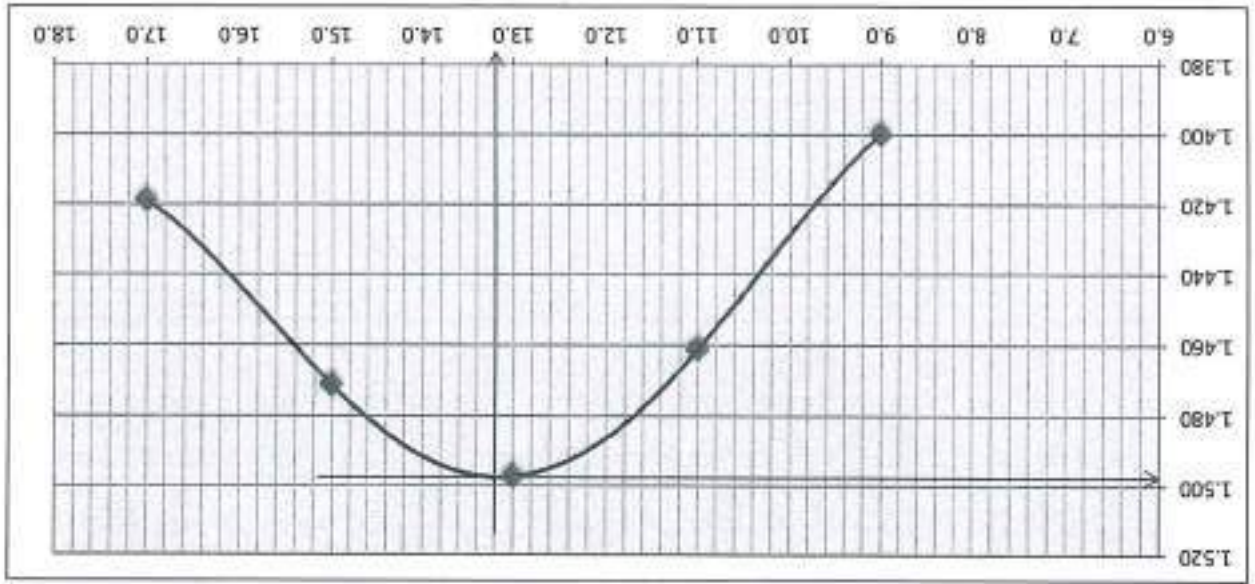
Reviewed by : Eng. Hosam Ismail

MOISTURE DENSITY RELATIONSHIP OF SOIL

ACCORDING TO ASTM D 1557

Project: خط أنابيب المياه على المنحدر / The water pipeline on the slope
Date: 2023-08-07
Sample delivery date: 02/08/2023
Sample Identification No.: Sample No. 10
Source of sample: Section B1 at St from (42+820) to (43+000) Slab at st (42+900) and (43+000)
Level (m): (-0.00) m Upper Embankment

Wet Unit Weight, g/cm^3	Water Content, %	Dry Unit Weight, g/cm^3
1.526	9.0	1.400
1.622	11.0	1.461
1.692	13.0	1.497
1.692	15.0	1.471
1.660	17.0	1.419



Result (s):
 1- Maximum dry density = $1.495 \text{ } g/cm^3$
 2- Optimum moisture content = 13.20%

Note (s):

Prepared by: Eng. El Khedr Abu Talib
 Reviewed by: Eng. Hossam Ismail



إدارة
المياه والصرف الصحي
(GARBLT)



CBR OF LABORATORY-COMPACTED SOILS ACCORDING TO ASTM D 1883

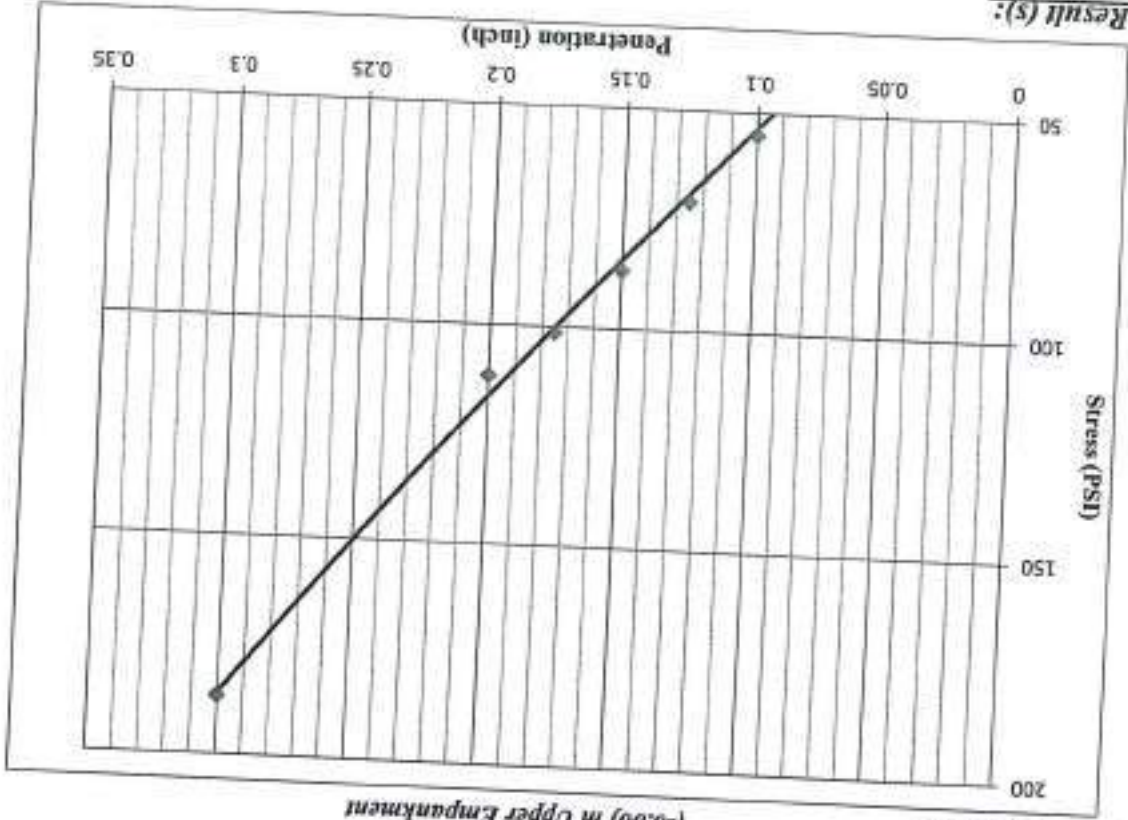
Project: **طريق لربوة الجديدة على محور /الربوة/ الجديد**

Sample delivery date: **02/08/2023**

Sample Identification No.: **Sample No. 10**

Source of sample: **Section B1 at Sl from (42+820) to (43+000) Slab at st (42+900) and (43+000)**

Level (m): **(-0.00) m Upper Embankment**



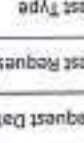
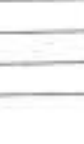
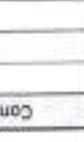
CBR at 0.1 Inch = **5.5 %**

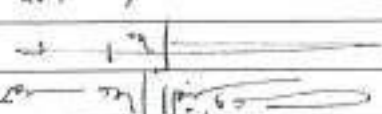
CBR at 0.2 Inch = **7.4 %**

Note (s):

Prepared by: **Eng. El Khedr Abu Talib**

Reviewed by: **Eng. Hossam Ismail**

OWNER:		CONSULTANT:	CONTRACTOR:								
 وزارة الموارد المائية والكهرباء دولة فلسطين		 السلطة الفلسطينية للمياه	 SMART Engineering & Construction								
TEST RESULT Request Date : 17-05-2023 Submit No : EMB-ENR-LB-008 Test Request Ref No : EMB-ENR-LB-CO8-A Section / Location : (B1) (43)											
Test Type ☐ Concrete ☒ Soil ☐ Other		Test Location ☐ In-Site ☐ Out Site Lab ☐ Others									
Description Ref. Attachment											
[44+420] الى (44+020) متر من (0.90-) ماسلوب على التربة الأرضية صلاحية الاختبار صلاحية											
Consultant Comments ① Approved as noted. سليم في الجداول											
Approval Status <table border="1" style="width: 100%;"> <tr> <td>(A)</td> <td>Approved</td> <td>C</td> <td>Resubmit As Noted</td> </tr> <tr> <td>B</td> <td>Approved As Noted</td> <td>D</td> <td>Rejected</td> </tr> </table>				(A)	Approved	C	Resubmit As Noted	B	Approved As Noted	D	Rejected
(A)	Approved	C	Resubmit As Noted								
B	Approved As Noted	D	Rejected								
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents											
Contractor Name : <i>[Signature]</i> Signature : <i>[Signature]</i> Date : 02-0-14		Consultant Name : <i>[Signature]</i> Signature : <i>[Signature]</i> Date : 02-0-14									

Date :		C. 04 - 0 - 14	
Signature :			
Name :		Contractor	
Date :		C. 04 - 0 - 14	
Signature :			
Name :		Consultant	

Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents

Approval Status	
☒ A Approved ☐ B Approved As Noted ☐ C Rejected As Noted ☐ D Rejected	

(1) Approved as noted
 95 Meters

Consultant Comments	

TEST REQUEST	
مشروع لإدراج حارة المسكة الحديد على محور / البرقي	
Request Date : 13 - 05 - 2023	Submital No :
Test Request Ref No : EMB-ENR-LB-008-A	Section / Location :
	(B1)
Test Type	Test Location
☐ Concrete ☐ Soil ☐ Other	☐ In-Site ☐ Out Site Lab ☐ Others
Description	
اختبار صلاحية الأرض الطينية على مستوى (0.90-) متر من (44+020) إلى (44+420)	
Ref. Attachment	
EMB-ENR-LB-008	

 CONTRACTOR	 CONSULTANT	 OWNER
---	--	--



المملكة العربية السعودية
السلطة العامة للمياه والصرف الصحي
(GARBLT)



PARTICLE SIZE ANALYSIS
OF SOILS AND MATERIALS FINER THAN # 200 Sieve
ASTM D - 422

Date: 17/05/2023

Project: الردواج المسكة الجديد على منحور / الردواج المسكة الجديد على منحور

Sample delivery date: 13/05/2023

Sample Identification No. : Sample No. 8

Source of sample: Section B1 at St from (44+020) to (44+420) Slab at st (44+100) & (44+300) and (44+400)

Level (m) : (-0.90) m Upper Embankment

Classification According to AASHTO: A-3

Percentage of materials finer than # 200: 9.4%

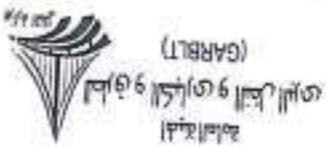
Sieve	Opening	Percentage	Notes
No.	(mm)	Passing %	
3 in.	75	100.0	
2.5 in.	63.5	100.0	
2 in.	50	100.0	
1.5 in.	38	99.0	
1 in.	25	97.8	
3/4 in.	19	96.0	
1/2 in.	12.5	94.1	
3/8 in.	9.5	92.1	
No. 4	4.75	87.5	
No. 10	2.0	82.6	
No. 40	0.425	63.7	
No. 200	0.075	9.4	

Notes:-

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Moassam Ismail

**LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS
ACCORDING TO ASTM D4318**



المركز الوطني للأبحاث والتقنية
أ/د. محمد الصالح حريف



Project: الطريق الجديد على محور /الزيتون/ A-3
Site: الموقع الجديد على محور /الزيتون/ A-3

Sample delivery date: 12/03/2022

Sample Identification No.: Sample No. 8

Source of sample:

Section B1 at St from (44+020) to (44+420) Slab at st (44+100) & (44+300)
and (44+400)

Level (m): (-0.90) in Upper Embankment
Classification According to AASHTO: A-3

Sample Identification No.	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
Sample No. 8	N.P.	N.P.	N.P.

Notes:-

Prepared by: Eng. El Khedr Abu Talib

Reviewed by: Eng. Hossam Ismail



الهيئة العامة
للبنية التحتية والبيئة
(GARBLT)



MOISTURE DENSITY RELATIONSHIP OF SOIL

ACCORDING TO ASTM D 1557

Date: 5/17/2023

Project: جدار التوطين السكني على طريق /الزيتوني/

13/05/2023

Sample delivery date:

Sample No. 8

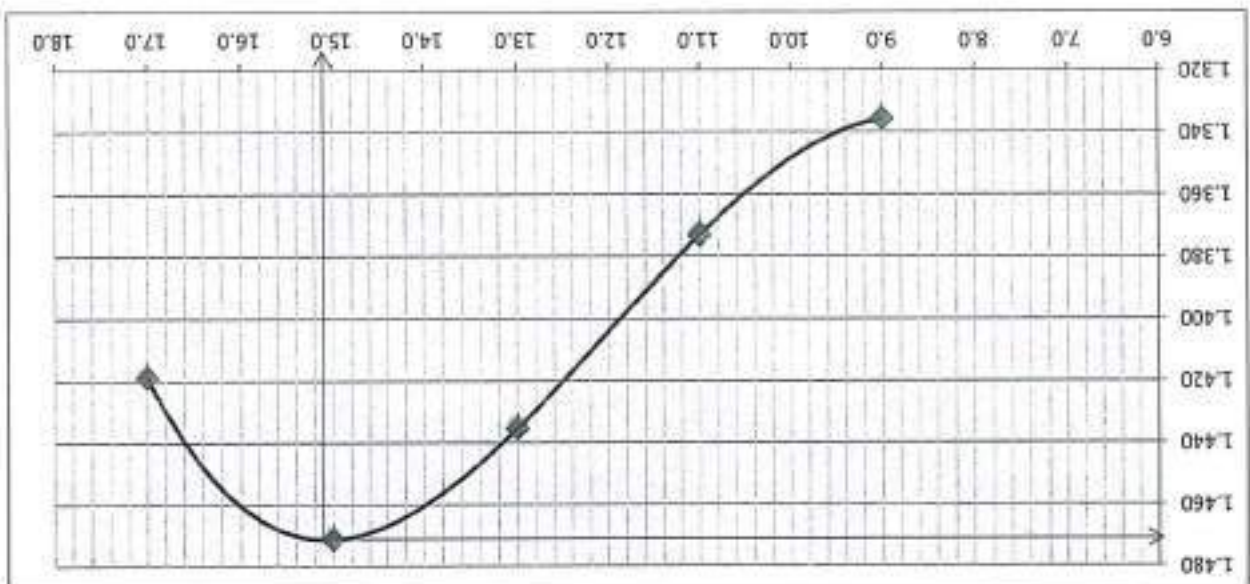
Sample Identification No.:

Section B1 at St from (44+020) to (44+420) Slab at st (44+100) &
(44+300) and (44+400)

Level (m):

(-0.90) m Upper Embankment

Wet Unit Weight, g/cm ³	Water Content, %	Dry Unit Weight, g/cm ³
1.456	9.0	1.336
1.524	11.0	1.373
1.622	13.0	1.435
1.692	15.0	1.471
1.660	17.0	1.419



Result (s):

1- Maximum dry density = 1.471 t/m³

2- Optimum moisture content = 15.10 %

Note (s):

Prepared by: Eng. El Khedr Abu Talib

Reviewed by: Eng. Hossam Ismail



الهيئة العامة
لإدارة الطرق والكباري والجسور
(GARBLT)



CBR OF LABORATORY-COMPACTED SOILS ACCORDING TO ASTM D 1883

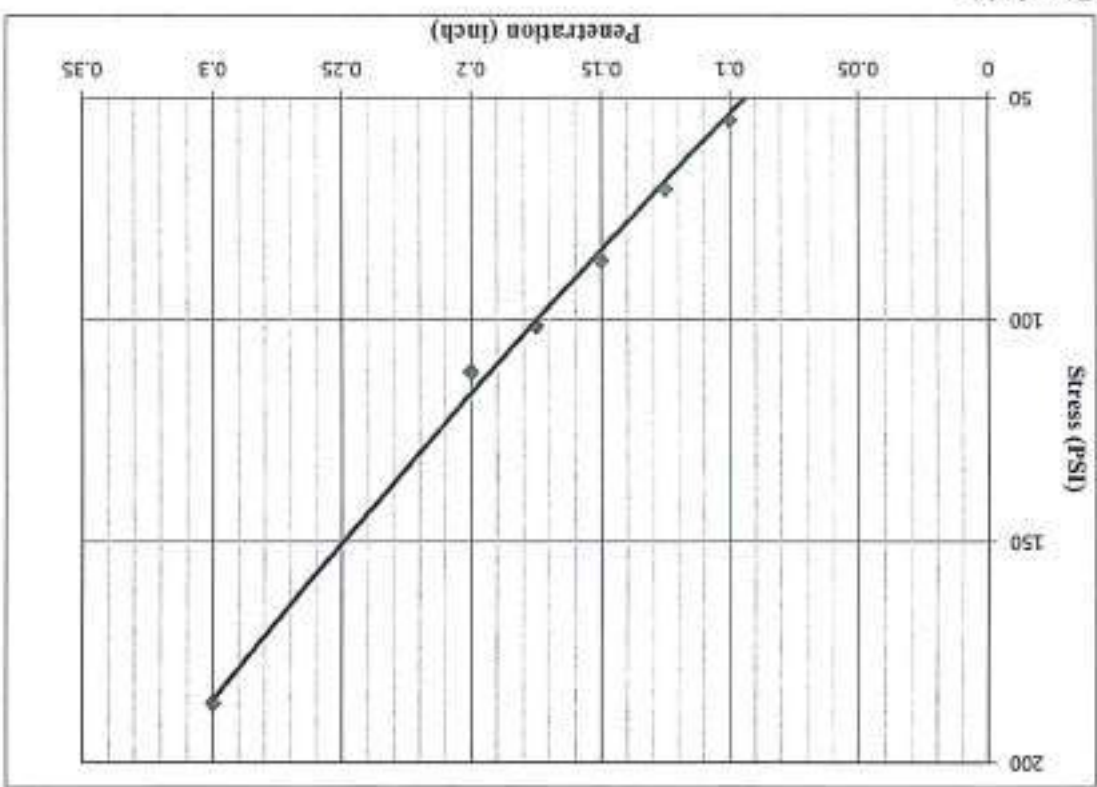
Project: طريق القاهرة الجديدة على محور /الرياضي/ (New Cairo Road on Axis /El-Raihy/)
Date: 5/17/2023

Sample delivery date: 13/05/2023

Sample Identification No.: Sample No. 8

Source of sample: Section B1 at St from (44+020) to (44+420) Slab at st (44+100) & (44+300) and (44+400)

Level (m): (-0.90) m Upper Embankment



Result (s):

CBR at 0.1 Inch =

5.5

%

CBR at 0.2 Inch =

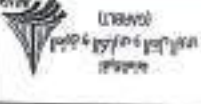
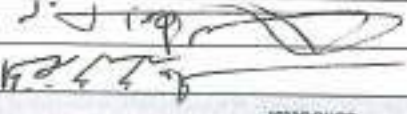
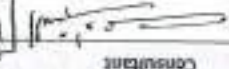
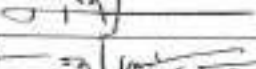
7.4

%

Note (s):

Prepared by: Eng. El Khedr Abu Talib

Reviewed by: Eng. Hossam Ismail

CONTRACTOR:									
TEST REQUEST									
Request Date : 16-04-2023									
Test Request Ref No : EMB-ENR-LB-008-A				Section / Location :		Submital No :		EMB-ENR-LB-008	
Test Type		☐ Concrete ☐ Soil ☐ Other							
Test Location		☐ In-Site ☐ Out Site Lab ☐ Others							
Description		اختبار صلابة الكرة على مسلوب (0.00-) متر من محطة (44+560) الى (44+420) الجانب الايمن من القسم الثاني							
Ref. Attachment									
Consultare Comments									
Approved as noted - cutting at 0.4m from Pervol.									
Approval Status		Approved		C		Resubmit As Noted		Rejected	
(A)		Approved As Noted		B		Rejected		Resubmit As Noted	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents									
Contractor		Name :		Signature :		Date :		Consultant	
									
Date :		11-3-17		11/3/17		11/3/17		11/3/17	

Contractor		Name :		Signature :		Date :	
Consultant		Name :		Signature :		Date :	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents							
Approval Status		Approved		Approved As Noted		Rejected	
A		B		C		D	
Resubmit As Noted		Approved		Approved As Noted		Rejected	
④ Approved as noted - cutting at 19 m from Petrol							
Consultant Comments							
Description							
Test Location							
Test Type							
Test Request Ref No : EMB-ENR-LB-008-A							
Request Date : 20-04-2023							
TEST RESULT							
Ref. Attachement							
Ref. Attachement							



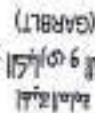
CONTRACTOR



CONSULTANT



OWNER



PARTICLE SIZE ANALYSIS
OF SOILS AND MATERIALS FINER THAN # 200 Sieve
ASTM D - 422

Date: 20/04/2023

Project: جـا اربواج السكة الحديد على محور / الرويحي / الرياض

Sample delivery date: 16/04/2023

Sample Identification No. : Sample No. 8

Source of sample: Section B1 at St (44+420) to (44+560) Slab at St (44+450) and (44+500). Left side

Level (m) : Upper Embankment (-0.00).

Classification According to AASHTO:

A-2-4

Percentage of materials finer than # 200:

5.8%

Sieve	No.	Opening (mm)	Percentage	Notes
3 in.	75	75	100.0	
2.5 in.	63.5	63.5	100.0	
2 in.	50	50	100.0	
1.5 in.	38	38	100.0	
1 in.	25	25	100.0	
3/4 in.	19	19	100.0	
3/8 in.	9.5	9.5	99.1	
No. 4	4.75	4.75	97.4	
No. 10	2.0	2.0	95.5	
No. 40	0.425	0.425	49.3	
No. 200	0.075	0.075	5.8	

Notes:-

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hossam Ismail

Reviewed by : Eng.Hossam Ismail

Prepared by : Eng. El Khedr Abu Talib

Notes:-

Sample Identification No.	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
Sample No. 8	30	23	7

Classification According to AASHTO:

A-2-4

Level (m) :

Upper Embankment (-0.00).

Source of sample:

Section B1 at St (44+420) to (44+560) Slab at St (44+450) and (44+500). Left side

Sample Identification No. : Sample No. 8

Sample delivery date:

16/04/2023

Project: طريق القاهرة الجديدة على محور الزهراء

Date: 20/04/2023

**LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS
ACCORDING TO ASTM D4318**



الهيئة العامة
للقوارب والكباري والبنى التحتية
(GARBLT)





الهيئة العامة
للأشغال والبنية التحتية
(GARBLT)

المركز الوطني للمختبرات الهندسية
أ/د. محمد الصفدي - مدير



MOISTURE DENSITY RELATIONSHIP OF SOIL

ACCORDING TO ASTM D 1557

Project: خطة لرفع المساحة الجغرافية في منطقة /الزيتوني

Sample delivery date: 16/04/2023

Sample Identification No. :

Sample No. 8

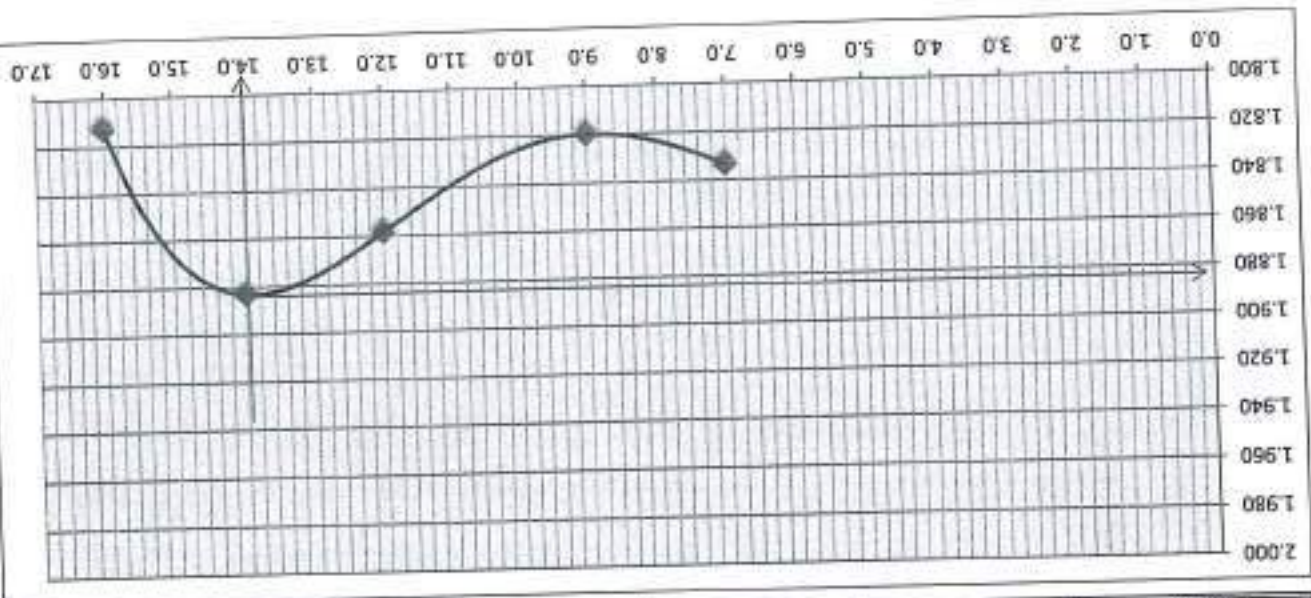
Source of sample:

Section B1 at St (44+420) to (44+560) Slab at St (44+450) and (44+500).

Left side

Level (m) : Upper Embankment (-0.00).

Wet Unit Weight, gm/cm ³	Water Content, %	Dry Unit Weight, gm/cm ³
1.962	7.0	1.834
1.984	9.0	1.820
2.082	12.0	1.859
2.147	14.0	1.883
2.103	16.0	1.813



Result (s):

1- Maximum dry density = 1.885 t/m³
2- Optimum moisture content = 14.00 %

Note (s):

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hosam Ismail

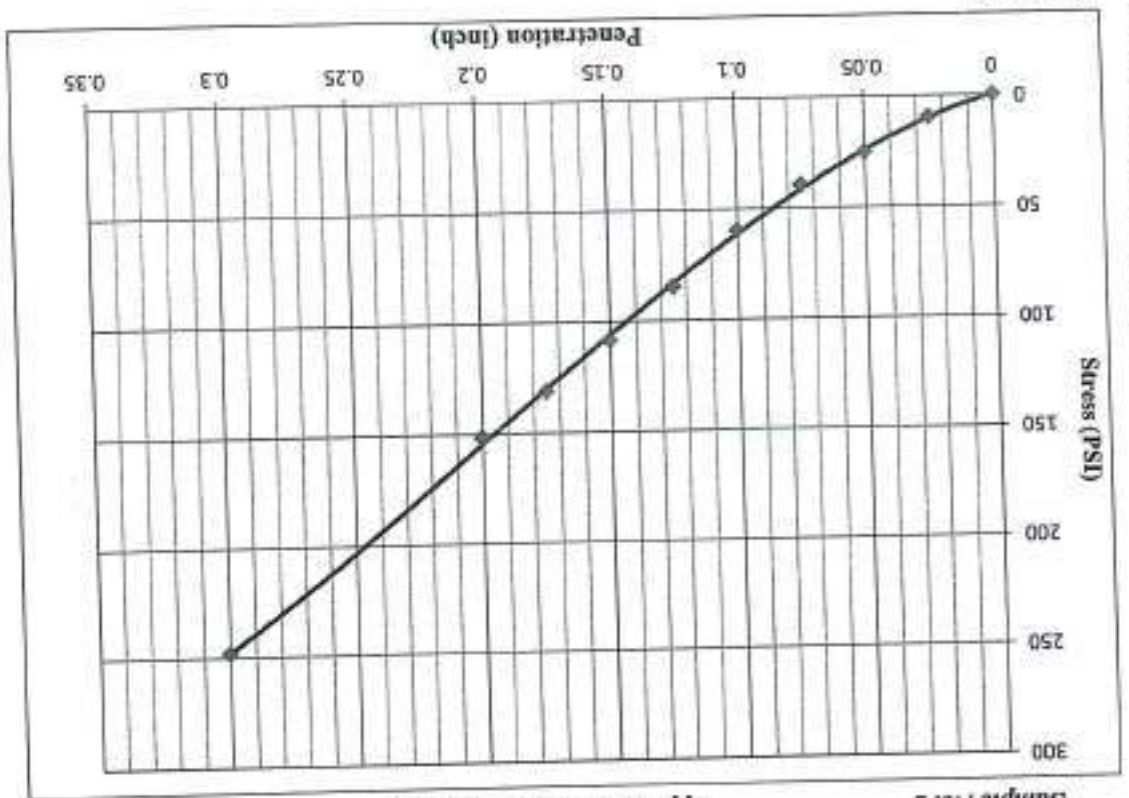


CBR OF LABORATORY-COMPACTED SOILS
ACCORDING TO ASTM D 1883

Project: *طريق الدوحة الجديد على مستوى / الدوحة / الدوحة*
Date: 4/20/2023

Sample delivery date: 16/04/2023
Sample Identification No.: Sample No. 8
Section B1 at St (44+420) to (44+560) Slab at St (44+450) and (44+500). Left side

Sample No. 2 Upper Embankment (-0.00).



Result (s):
CBR at 0.1 Inch = 6.0 %
CBR at 0.2 Inch = 10.1 %

Note (s):

Prepared by: Eng. El Khedr Abu Talib

Reviewed by: Eng. Hossam Ismail

Date :		01/05/2023	
Signature :			
Name :		Contractor	
Date :		01/05/2023	
Signature :			
Name :		Consultant	

Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents

Approved	Approved As Noted	Rejected
0	0	0
Approved	Approved As Noted	Rejected
0	0	0

Approval Status

Approved

Refused

Consultant Comments

(38+700) (38+820) من محطة (38+700) إلى (38+820) لخدمة أعمال إصلاح الأرض الطينية

Description

Ref. Attachment

Test Location

Test Type

Test Request Ref No : EMB-ENR-LB-012-A

Request Date : 07-08 - 2023

Submittal No :

Section / Location :

Emb-ENR-LB-012

(46)

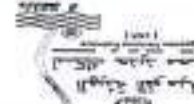
TEST RESULT

مستوى ارتفاع سطح الأرض / الأرض

OWNER

CONSULTANT

CONTRACTOR

							
CONTRACTOR:		CONSULTANT:		OWNER:		TEST REQUEST	
Request Date : 03 - 08 - 2023		Submittal No :		EMB-ENR-LB-012		Test Request Ref No : EMB-ENR-LB-012-A	
Test Type		☐ Concrete ☐ Soil ☐ Other		Test Location		☐ In- ☐ Site ☐ Out Site Lab ☐ Others	
Description		Ref. Attachement					
اختبار صلاحية الأرض الطبيعية من محطة (38+820) إلى (38+700) اختبار صلاحية الأرض الطبيعية							
Request Date : 03 - 08 - 2023		Submittal No :		EMB-ENR-LB-012		Test Request Ref No : EMB-ENR-LB-012-A	
Test Type		☐ Concrete ☐ Soil ☐ Other		Test Location		☐ In- ☐ Site ☐ Out Site Lab ☐ Others	
Description		Ref. Attachement					
اختبار صلاحية الأرض الطبيعية من محطة (38+820) إلى (38+700) اختبار صلاحية الأرض الطبيعية							
Approval Status		☒ Approved ☐ Resubmit As Noted		☐ Approved As Noted ☐ Rejected		Note: The above works have been approved according to the project specifications, approved working drawings and contract documents	
Contractor		Consultant		Name :		Signature :	
Date :		Signature :		Date :		Signature :	

PARTICLE SIZE ANALYSIS
OF SOILS AND MATERIALS FINER THAN # 200 Sieve
ASTM D - 422

Project: خط أنابيب السكة الحديد على محور / الرويفي / الرياض
Date: 07/08/2023

Sample delivery date: 03/08/2023

Sample Identification No.: Sample No.12

Source of sample: Section A5 at St from (38+700) to (38+820) Slab at st (38+750)

Level (m): N.G.L

Classification According to AASHTO:

A-3

Percentage of materials finer than # 200:

9.7%

Notes	Percentage	Opening (mm)	Stieve
	Passing %	No.	
	100.0	75	3 in.
	100.0	63.5	2.5 in.
	100.0	50	2 in.
	99.2	38	1.5 in.
	98.1	25	1 in.
	96.6	19	3/4 in.
	95.1	12.5	1/2 in.
	93.4	9.5	3/8 in.
	89.5	4.75	No. 4
	84.5	2.0	No. 10
	65.1	0.425	No. 40
	9.7	0.075	No. 200

Notes:-

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hosam Ismail



إدارة
المياه و
الصحف
(GARBLT)



LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS ACCORDING TO ASTM D4318

Project: الطرق الجديدة على محور / الزمكي / الزمكي

Date: 07/08/2023

Sample delivery date: 03/08/2023

Sample Identification No.: Sample No.12

Source of sample: Section A5 at St from (35+820) to (37+300) Slab at st (36+500)

Level (m): N.G.L

Classification According to AASHTO:

A-3

Sample Identification No.	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
Sample No.12	N.P.	N.P.	N.P.

Notes:-

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hossam Ismail

MOISTURE DENSITY RELATIONSHIP OF SOIL

ACCORDING TO ASTM D 1557

المركز القومي للمختبرات الهندسية
إدارة مختبر الصلابة جوفاء



(GARBLT)

المشروعات والبنية التحتية
للمخططات والدراسات



المشروعات والبنية التحتية
للمخططات والدراسات



Date: 8/7/2023

03/08/2023

Sample Identification No.:

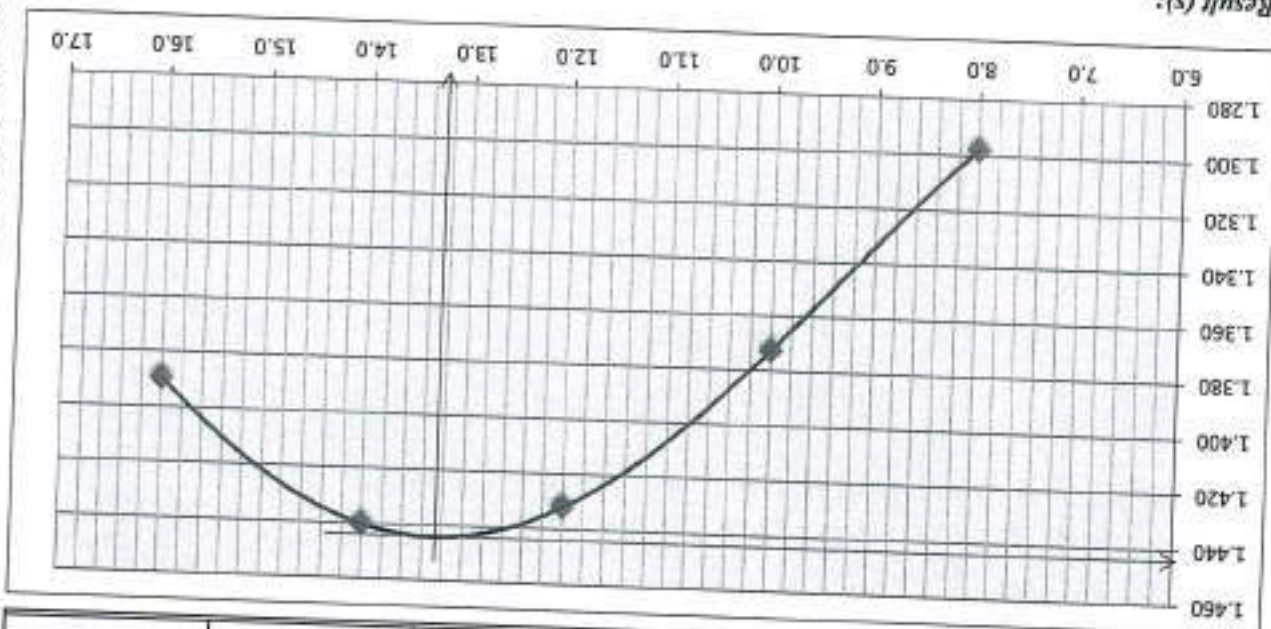
Sample No. 12

Source of sample:

Section A5 at St from (38+700) to (38+820) Slab at st (38+750)

N.G.L

Wet Unit Weight, g/m^3	Water Content, %	Dry Unit Weight, g/m^3
1.402	8.0	1.298
1.510	10.0	1.373
1.604	12.0	1.432
1.642	14.0	1.440
1.612	16.0	1.390



Result (s):

1- Maximum dry density = 1.445 g/m^3
2- Optimum moisture content = 13.30 %

Note (s):

Prepared by: Eng. El Khedr Abu Talib

Reviewed by: Eng. Hossam Ismail

CBR OF LABORATORY-COMPACTED SOILS ACCORDING TO ASTM D 1883

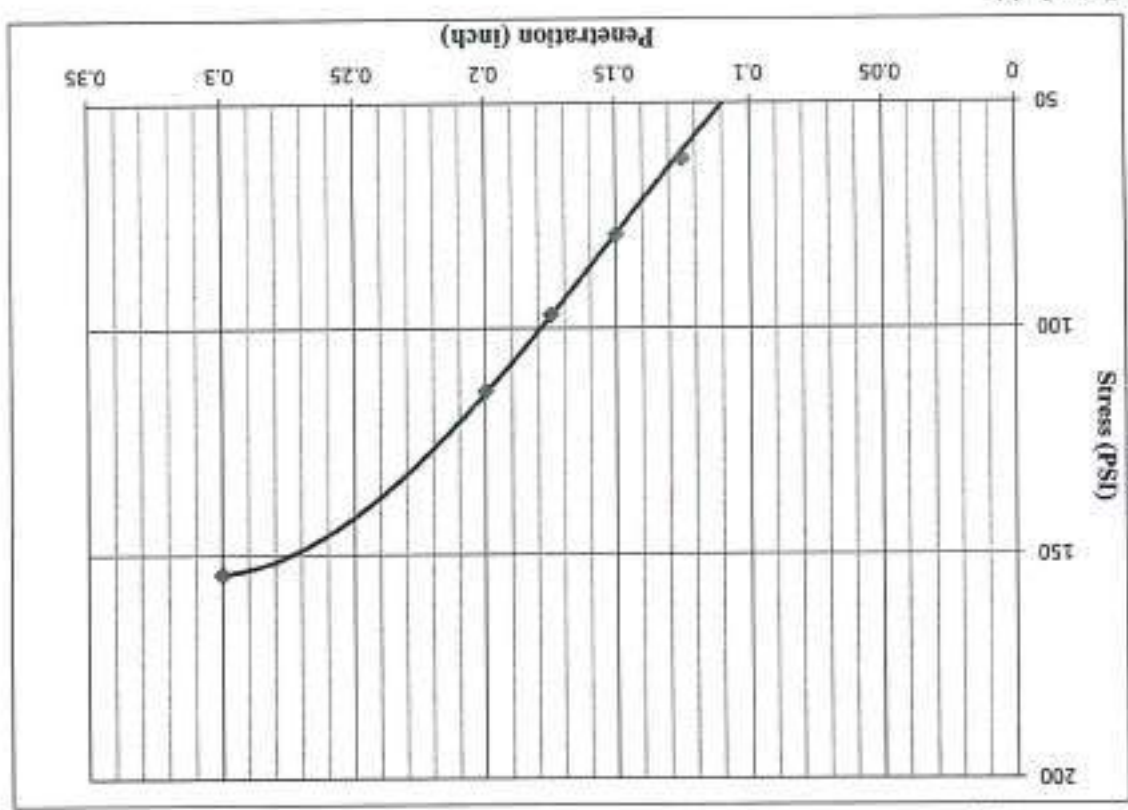
Project: **طريق الكباري على محور الخليل/الريفي** Date: **8/7/2023**

Sample delivery date: **03/08/2023**

Sample Identification No.: **Sample No.12**

Source of sample: **Section A5 at St from (38+700) to (38+820) Slab at st (38+750)**

Level (m): **N.G.L**



Result (s):

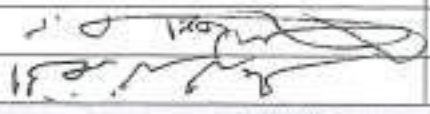
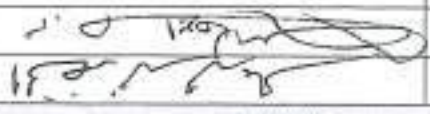
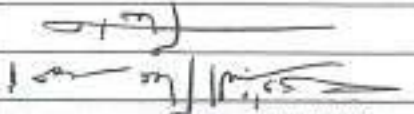
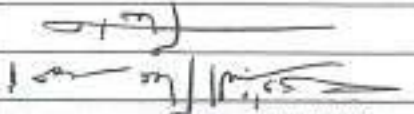
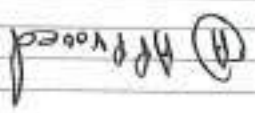
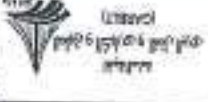
CBR at 0.1 Inch = **4.0** %
CBR at 0.2 Inch = **7.6** %

Note (s):

Prepared by : **Eng. El Khedr Abu Talib**

Reviewed by : **Eng. Hossam Ismail**

(Signature)

Contractor Name:  Signature:  Date: 13-4-2023		Consultant Name:  Signature:  Date: 3/4/2023	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.			
Approval Status (A) Approved B Approved As Noted C Approved D Rejected Resident As Noted			
			
Consultant Comments			
Request Date: 04-08-2023 Test Request Ref No: EMB-ENR-LB-014-A Section / Location: (AS) Submittal No: EMB-ENR-LB-014		Test Type: ☐ Concrete ☐ Soil ☐ Other Test Location: ☐ In-Site ☐ Out Site Lab ☐ Others Description: الـ (38+320) الى (38+000) من (0.00-) ملسوب على القاعية على الارض (360+38) نتيجة اختبار صلاحية الارض	
Request Date: 04-08-2023		Ref. Attachment	
TEST RESULT			
مشروع لادراج خط 25 كم الجديد على محور / الدمام / الرياض			
 CONTRACTOR	 CONSULTANT	 OWNER	 OWNER

							
Request Date : 01-08-2023		Submital No :		Section / Location :		Test Request Ref No : EMB-ENR-LB-014-A	
Test Type		☐ Concret ☐ Soil ☐ Other		Test Location		☐ In- ☐ Site ☐ Out Site Lab ☐ Others	
Description		Ref. Attachment					
(38+360) الي (38+320) محطة (38+200) الي (38+000) متر من (0.00-) مستوى على المنطقة الارضى الملاحة الارضى الملاحة							
Consultant Comments							
Approved							
Approval Status							
☒ Approved		☐ Approved As Noted		☐ Rejected		☐ Resubmit As Noted	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.							
Contractor		Consultant		Name :		Signature :	
Date : 01-08-2023		Date : 01-08-2023		Signature :		Signature :	



PARTICLE SIZE ANALYSIS
OF SOILS AND MATERIALS FINER THAN # 200 Sieve
ASTM D - 422

Project: **خط انزواج السكة الحديد على محور / الرومي** Date: 04/08/2023

Sample delivery date: 01/08/2023

Sample Identification No. : Sample No. 14

Source of sample: Section A5 at St from (38+000) to (38+200) and from (38+320) to (38+360) Slab at st (38+100) and (38+350) Left side

Level (m) : NGL (-0.00) m

Classification According to AASHTO:

A-1-b

Percentage of materials finer than # 200:

9.3%

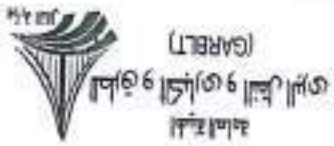
Sieve	Opening	Percentage	Notes
No.	(mm)	Passing %	
3 in.	75	100.0	
2.5 in.	63.5	100.0	
2 in.	50	100.0	
1.5 in.	38	96.7	
1 in.	25	88.8	
3/4 in.	19	84.2	
3/8 in.	9.5	74.9	
No. 4	4.75	65.4	
No. 10	2.0	55.1	
No. 40	0.425	36.9	
No. 200	0.075	9.3	

Notes:-

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hossam Ismail

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS **ACCORDING TO ASTM D4318**



المركز الوطني للمعايير والبحوث
 ا.د. محمد الصالح عرفه



Project: محطة السكة الحديد على المنصورة / المشروع

Sample delivery date: 01/08/2023

Sample Identification No.: Sample No. 14

Source of sample:

Section A5 at St from (38+000) to (38+200) and from (38+320) to (38+360) Slab

Level (m): NGL (-0.00) m

Classification According to AASHTO:

A-1-b

Notes:-

Sample Identification No.	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
Sample No. 14	N.P.	N.P.	N.P.

Prepared by : Eng. El Khedr Abu Talib

Reviewed by : Eng. Hossam Ismail





الهيئة العامة
للطرق والكباري والمواصلات
(GARBLT)



المركز الوطني للتخطيط العمراني
والإنشاءات الحضرية
إ.د. محمد المصطفى عوف



MOISTURE DENSITY RELATIONSHIP OF SOIL

ACCORDING TO ASTM D 1557

Project: شبكة الطرق المحلية على مستوى المنطقة / Local Roads Network

Date: 8/4/2023

Sample delivery date:

01/08/2023

Sample Identification No.:

Sample No. 14

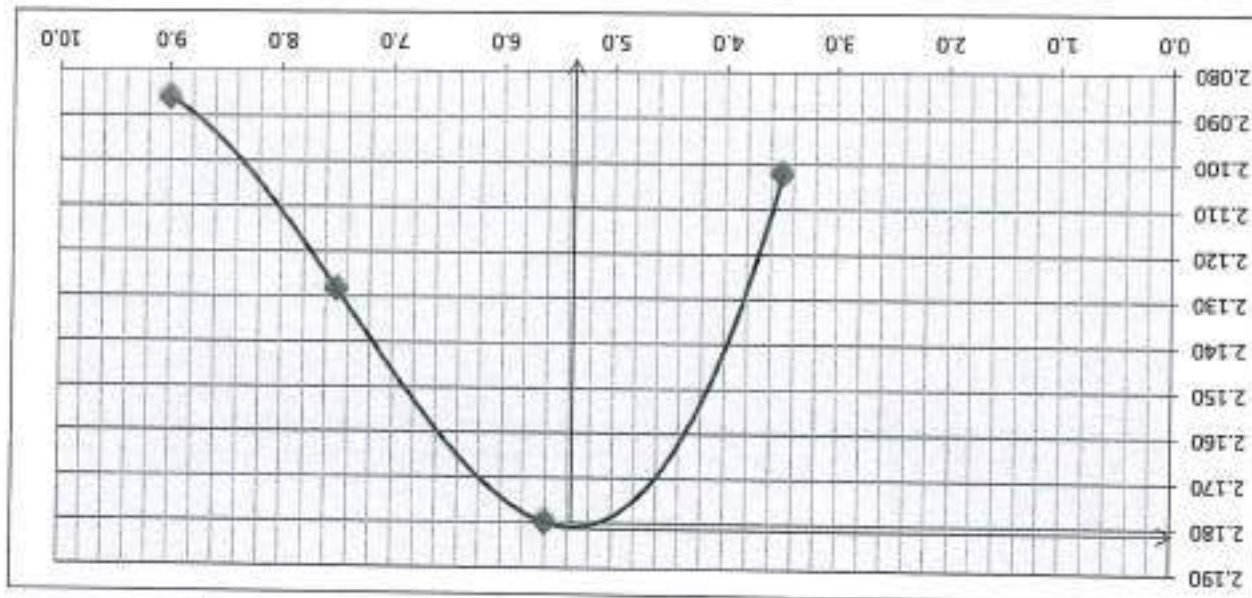
Source of sample:

Section A5 at St from (38+000) to (38+200) and from (38+320) to (38+360) Slab at st (38+100) and (38+350) Left side.

Level (m):

NGL (-0.00) m

Wet Unit Weight, g/cm^3	Water Content, %	Dry Unit Weight, g/cm^3
2.176	3.5	2.102
2.302	5.6	2.180
2.288	7.5	2.128
2.274	9.0	2.086



Result (s):

1- Maximum dry density = $2.182 \text{ } g/m^3$
2- Optimum moisture content = 5.38%

Note (s):

Prepared by: Eng. El Khedr Abu Talib

Reviewed by: Eng. Hossam Ismail

Prepared by : Eng. El Khedr Abu Talib

Note (s):

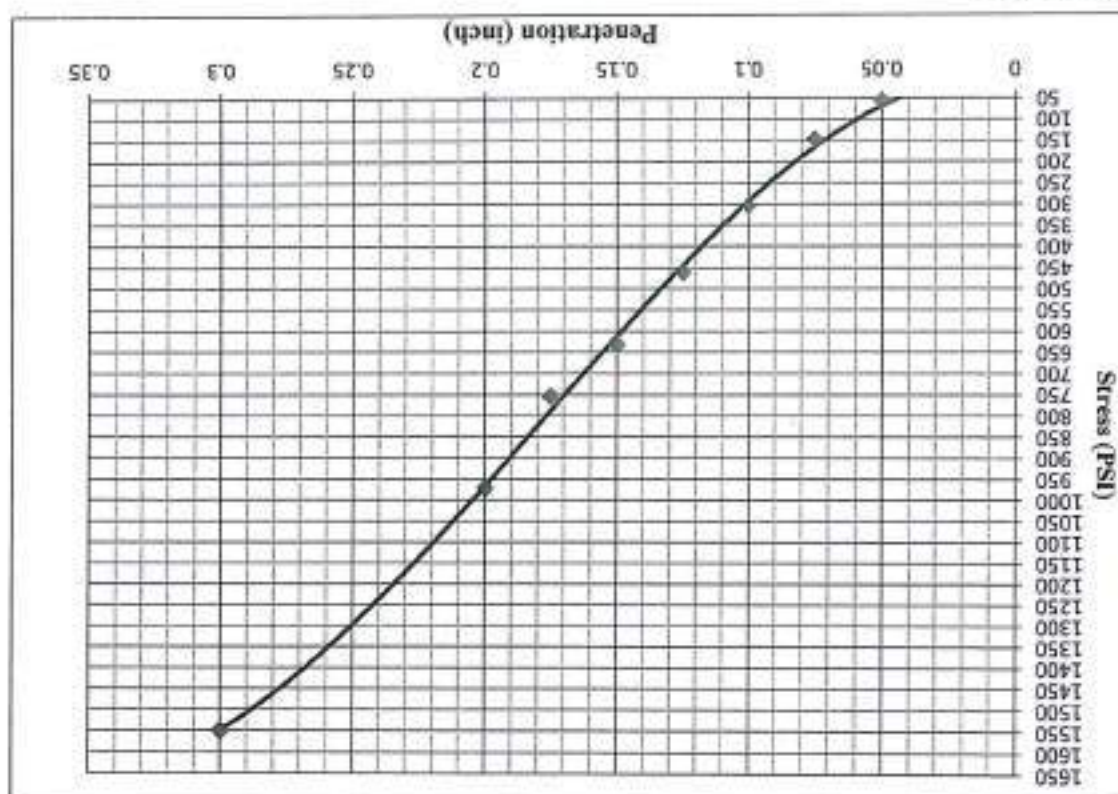
$$CBR \text{ at } 0.2 \text{ Inch} =$$

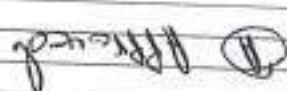
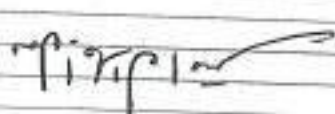
30.4%

$$CBR \text{ at } 0.2 \text{ Inch} =$$

64.8%

Result (s):



CONTRACTOR		CONSULTANT		OWNER	
 وزارة الأشغال العامة والإسكان General Directorate of Public Works and Urban Planning		 وزارة الإسكان Ministry of Housing		 وزارة الموارد المائية Ministry of Water Resources	
TEST RESULT					
Request Date : 27-09-2023					
Test Request Ref No : EMB-ENR-LB-015-A		Section / Location :			
Test Type		☐ Concrete ☐ Soil ☐ Other			
Test Location		☐ In-Site ☐ Site Lab ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
نتيجة اختبار صلابة الخرابة على منسوب (0.00-) متر من طبقة (39+920) في (40+200)					
Consultant Comments					
 Approved  مقبول					
Approval Status					
☒ Approved		☐ Rejected			
☐ Approved As Noted		☐ Rejected As Noted			
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.					
Contractor Name : Signature : Date :		Consultant Name : Signature : Date :			

OWNER جمهورية مصر العربية وزارة المياه والري الهيئة العامة للمياه والري		CONSULTANT شركة مياه و كهرباء مصر		OWNER جمهورية مصر العربية وزارة المياه والري الهيئة العامة للمياه والري		CONSULTANT شركة مياه و كهرباء مصر	

TEST REQUEST			
Request Date : 23-09-2023			
Test Request Ref No : EMB-ENR-LB-015-A		Section / Location :	
Submittal No :		EMB-ENR-LB-015	
Test Type		Test Location	
☐ Concrete ☐ Soil		☐ In- ☐ Site	
☐ Other		☐ Out Site Lab ☐ Others	
Description			
(40+200) الى (39+920) مساحة 0.00- متر من محطة			
اختبار صلاحية الرية على مستوى			
Ref. Attachment			

Approval Status	
Approved	Approved As Noted
Rejected	Rejected As Noted

Approval Status	
Approved	Approved As Noted
Rejected	Rejected As Noted

Approval Status	
Approved	Approved As Noted
Rejected	Rejected As Noted

Approval Status	
Approved	Approved As Noted
Rejected	Rejected As Noted

Approval Status	
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Rejected	Rejected As Noted

Approval Status	
Approved	Approved As Noted
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Approval Status	
Approved	Approved As Noted
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Rejected	Rejected As Noted

Approval Status	
Approved	Approved As Noted
Rejected	Rejected As Noted

Approval Status	
Approved	Approved As Noted
Rejected	Rejected As Noted



المركز الوطني للأبحاث والتحليلات
البيئية والموارد المائية



المركز الوطني للأبحاث والتحليلات
البيئية والموارد المائية (GARBLT)



PARTICLE SIZE ANALYSIS
OF SOILS AND MATERIALS FINER THAN # 200 Sieve
ASTM D - 422

Project: السكك الحديدية على مستوى / البرقي
خط (زواج) السكك الحديدية على مستوى / البرقي

Sample delivery date: 23/09/2023

Sample Identification No.: Sample No. 15

Source of sample: Section B1 at Sl from (39+920) to (40+200) Slab at sl (40+000) and (40+100).

Level (m): (-0.00) m Upper Embankment

Classification According to AASHTO:

A-3

Percentage of materials finer than # 200:

8.3%

Sieve	Opening	Percentage	Notes
No.	(mm)	Passing %	
3 in.	75	100.0	
2.5 in.	63.5	100.0	
2 in.	50	100.0	
1.5 in.	38	99.1	
1 in.	25	97.9	
3/4 in.	19	96.2	
1/2 in.	12.5	94.4	
3/8 in.	9.5	92.4	
No. 4	4.75	88.0	
No. 10	2.0	81.0	
No. 40	0.425	61.6	
No. 200	0.075	8.3	

Notes:-

Prepared by: Eng. El Kheir Abu Talib

Reviewed by: Eng. Hosam Ismail

Reviewed by : Eng. Hossam Ismail

Hossam

Prepared by : Eng. El Khedr Abu Talib

El Khedr

Notes:-

Sample Identification No.	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
Sample No. 15	N.P.	N.P.	N.P.

Classification According to AASHTO:

A-3

Level (m) : (-0.00) m Upper Embankment

Source of sample: Section B1 at St from (39+920) to (40+200) Slab at st (40+000) and (40+100).

Sample Identification No. : Sample No. 15

Sample delivery date: 23/09/2023

Project: خط أنفاق الحديد على مترو / الرويحي / Date: 27/09/2023

**LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS
ACCORDING TO ASTM D4318**



المجلس التشريعي
والإداري وبلد
(GARBLT)





المركز القومي للبحوث والتقنية
البيئية والموارد المائية



المجلس
الاقتصادي
والإحصائي
(GARBLT)



MOISTURE DENSITY RELATIONSHIP OF SOIL ACCORDING TO ASTM D 1557

Date: 2023-09-27

Project: محطة معالجة مياه الصرف الصحي / El Kheider / El Kheider

Sample delivery date: 23/09/2023

Sample Identification No.:

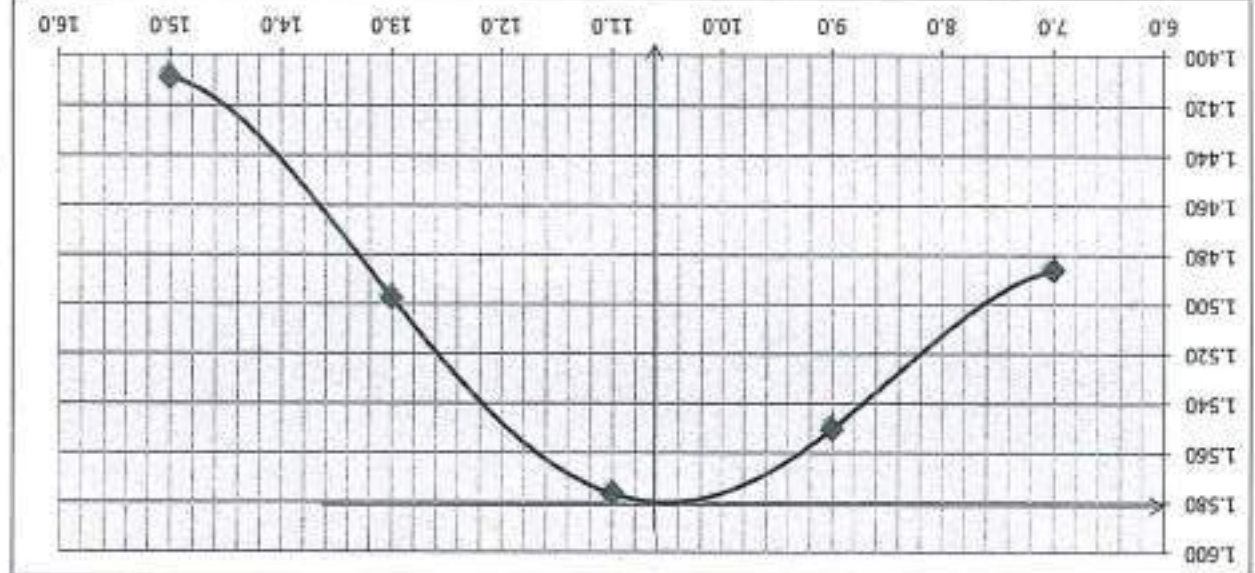
Sample No. 15

Source of sample:

Section B1 at Slab from (39+920) to (40+200) Slab at st (40+000) and (40+100).

Level (m): (-0.00) in Upper Embankment

Wet Unit Weight, gm/cm ³	Water Content, %	Dry Unit Weight, gm/cm ³
1.590	7.0	1.486
1.690	9.0	1.550
1.750	11.0	1.577
1.692	13.0	1.497
1.620	15.0	1.409



Result (s):

1- Maximum dry density = 1.580 t/m³
2- Optimum moisture content = 10.60 %

Note (s):

Prepared by : Eng. El Kheider Abu Talib

Reviewed by : Eng. Hossam Ismail

CBR OF LABORATORY-COMPACTED SOILS

ACCORDING TO ASTM D 1883

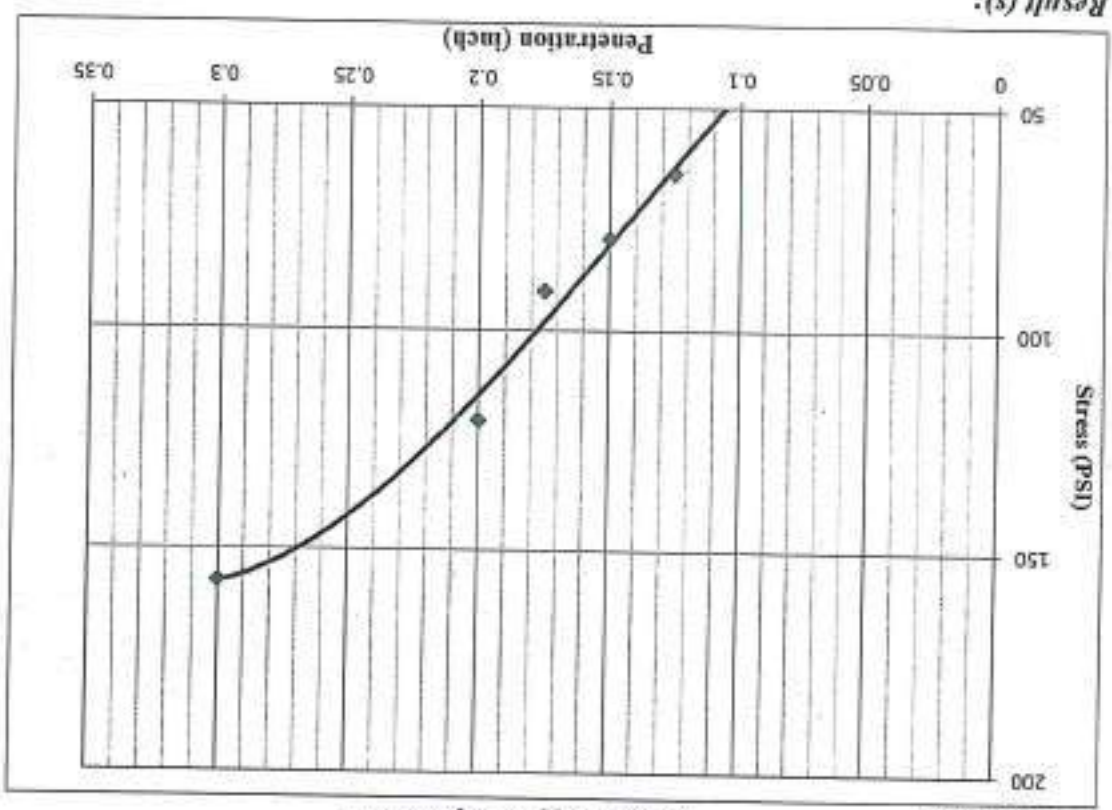
Project: *طريق الدمام الجديد على محور الرياض/الرياض* Date: 9/27/2023

Sample delivery date: 23/09/2023

Sample Identification No.: Sample No. 15

Source of sample: Section B1 at SI from (39+920) to (40+200) Slab at st (40+000) and (40+100).

Level (m): (-0.00) in Upper Embankment

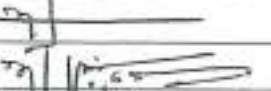
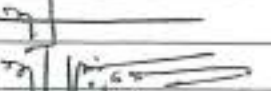


Result (s):
CBR at 0.1 Inch = 4.7 %
CBR at 0.2 Inch = 8.0 %

Note (s):

Prepared by: *Eng. El Khedr Abu Talib*

Reviewed by: *Eng. Hossam Ismail*

CONTRACTOR: 		CONSULTANT: 		OWNER: 	
TEST REQUEST					
Request Date : 01 - 08 - 2023					
Test Request Ref No : EMB-ENH-LB-013-A					
Submittal No :		Section / Location :			
EMB-ENH-LB-013		(A5)			
Test Type		☐ Concrete ☐ Soil ☐ Other			
Test Location		☐ In-Site ☐ Out Site Lab ☐ Others			
Description		Ref. Attachment			
اختبار صلابة الخرسانة في محطة (38+360) ومن محطة (38+320) إلى (38+200)					
Consultant Comments					
Approved					
Approval Status					
☒ Approved		☐ Resubmit As Noted		☐ Rejected	
☐ B		☐ D		☐ C	
Note: The above works have been approved according to the project specifications, approved workshop drawings and contract documents.					
Contractor Name :  Signature :  Date : 01-08-2023		Consultant Name :  Signature :  Date : 01/08/23			



الهيئة العامة
للأشغال والكباري والبحر (GARLT)



PARTICLE SIZE ANALYSIS
OF SOILS AND MATERIALS FINER THAN # 200 Sieve
ASTM D - 422

Project: خط أنابيب الغاز من مصر إلى ليبيا / Egypt-Libya Gas Pipeline
Date: 04/08/2023

Sample delivery date: 01/08/2023

Sample Identification No.: Sample No. 13

Source of sample: Section A5 at St (38+200) to (38+320) & (38+360) to (38+740) Slab at St (38+250) and (38+500) Left Side

Level (m): N.G.L

Classification According to AASHTO: A-2-4

Percentage of materials finer than # 200: 12.0%

Sieve	Opening	Percentage	Notes
No.	(mm)	Passing %	
3 in.	75	100.0	
2.5 in.	63.5	100.0	
2 in.	50	98.7	
1.5 in.	38	98.3	
1 in.	25	95.8	
3/4 in.	19	94.5	
3/8 in.	9.5	91.8	
No. 4	4.75	89.5	
No. 10	2.0	87.7	
No. 40	0.425	68.9	
No. 200	0.075	12.0	

Notes:-

Prepared by: Eng. El Kheir Abu Talib

Reviewed by: Eng. Hossam Ismail

Prepared by : Eng. El Khedr Abu Talib
 Reviewed by : Eng. Hossam Ismail

Notes:-

Sample Identification No.	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)
Sample No. 13	N.P.	N.P.	N.P.

Project: **إسككج الإسكندرية على البحر / الإسكندرية**
 Sample delivery date: 01/08/2023
 Sample Identification No.: Sample No. 13
 Source of sample: Section A5 at St (38+200) to (38+320) & (38+360) to (38+740) Slab at St (38+250) and (38+500) Left Side.
 Level (m): N.G.L
 Classification According to AASHTO: A-2-4

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS
ACCORDING TO ASTM D4318





السلطة الفلسطينية
والبلد والبلد
(GARBLT)



المركز الوطني للمختبرات الهندسية
إدارة مختبر الطرق جوف



MOISTURE DENSITY RELATIONSHIP OF SOIL

ACCORDING TO ASTM D 1557

Project: شبكة الطرق الجديدة على الجسر / الجسر / الجسر

Date: 8/4/2023

Sample delivery date:

01/08/2023

Sample Identification No.:

Sample No. 13

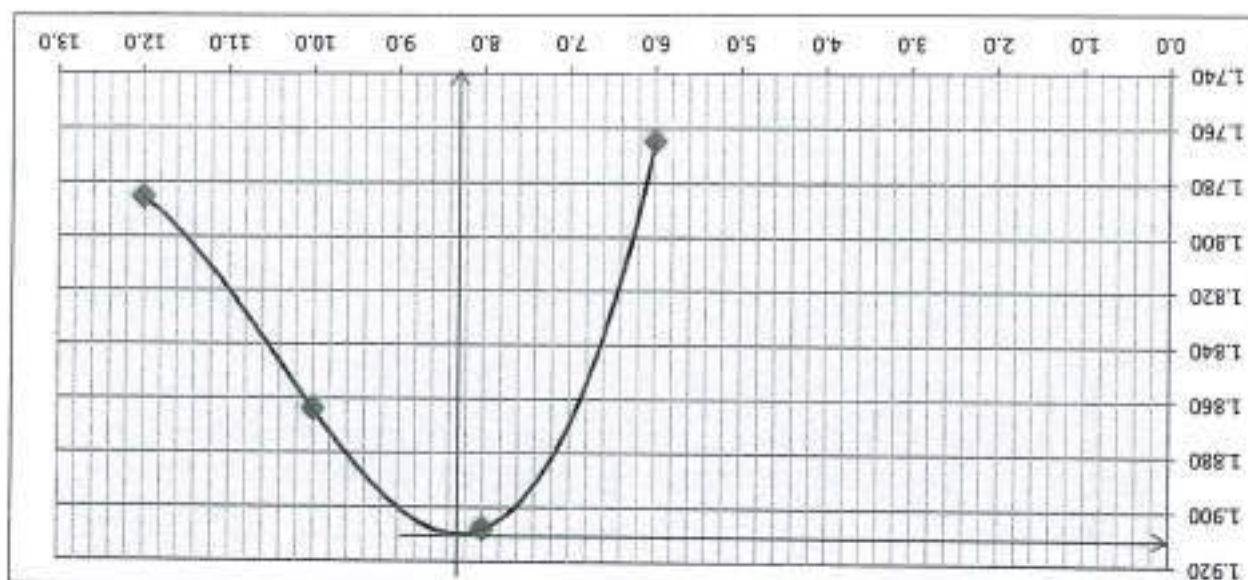
Source of sample:

Section A5 at St (38+200) to (38+320) & (38+360) to (38+740) Slab
at St (38+250) and (38+500) Left Side.

Level (m):

N.G.L

Wet Unit Weight, g/cm ³	Water Content, %	Dry Unit Weight, g/cm ³
1.871	6.0	1.765
2.061	8.0	1.908
2.051	10.0	1.864
2.000	12.0	1.786



Result (s):

1- Maximum dry density = 1.910 t/m³
2- Optimum moisture content = 8.60 %

Note (s):

Prepared by: Eng. El Khedr Abu Talib

Reviewed by: Eng. Hossam Ismail

CBR OF LABORATORY-COMPACTED SOILS ACCORDING TO ASTM D 1883

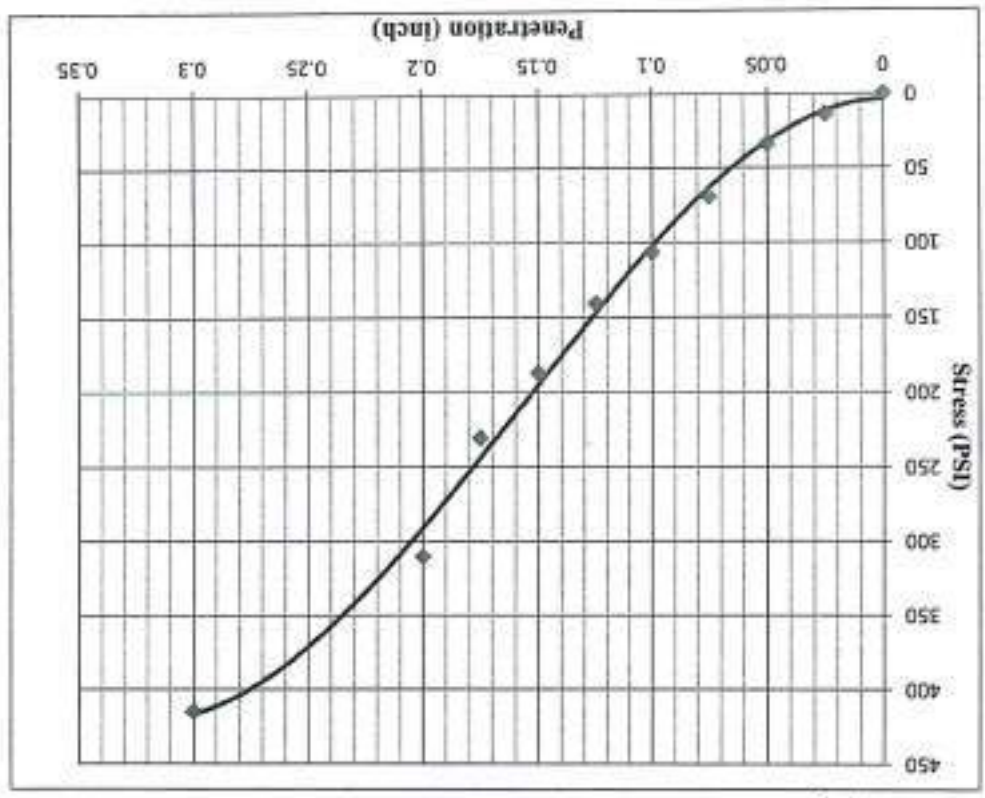
Project: خط أنابيب المياه من محطة الصرف الصحي إلى المنطقة الصناعية / Al-Rajhi
Date: 8/4/2023

Sample delivery date: 01/08/2023

Sample Identification No.: Sample No. 13

Source of sample: Section A5 at St (38+200) to (38+320) & (38+360) to (38+740) Slab at St (38+250) and (38+500) Left Side

Level (m): N.G.L



Result (s):

CBR at 0.1 Inch = 10.7 %

CBR at 0.2 Inch = 20.7 %

Note (s):

Prepared by: Eng. El Khedr Abu Talib

Reviewed by: Eng. Hosam Ismail