

مقايسة ختاميه

بخصوص :- اعمال الجسر الترابى والاعمال الصناعية لمشروع القطار الكهربائى السريع بطول ١كم اتجاه فوكة مقاولة :- شركة الزهور للمقاولات العمومية

بمناسبة انتهاء الاعمال الخاصة بالعملية عالية وعمل المستخلص الختامي طبقا للكميات المنفذه على الطبيعة فقد تم أعداد المقايسة الختامية المرفقه لكافة بنودالعملية باجمالي مبلغ ٢٠٠٠٠٠٠ جنيه (فقط وقدره عشرون مليون جنيها لاغير)

مدير عام المشروعات

مهندس / المشرف على تنفيذ العملية

الاسم ا هممد عدمت فياح

التوقيع الح

الاسم البراطم عباله اطنار)

رئيس الإدارة المركزية منطــقة غـرب الــــلتا ((بالإسكندرية/ مرسى مطروح)

عميد مهندس / ١٩ هاني محمد محمود طه ١٩٠٠











مشروع القطار الكهرياني السريع المقايسة الختامية لبنود الاعمال للقطاع السابع (فوكة - مطروح) - شركة الزهور - اتجاه فوكة القطاع من المحطة ٠٠٠ +٥٣٦ الى ٥٣٠٠٠

م اليند	بيان الأعمال	الوحدة	الكمية	القئة	الاجمالي
1 "	اعمال الردم			1	
111111111111111111111111111111111111111	بالمتر المكعب اعمال توريد وتشغيل اترية صالحة للردم و مطابقة للمواصفات والتشغيل باستخدام الات التسوية بسمك لا يزيد عن ٥٠ سم حتى منسوب ٢٠ متر و بسمك لا يزيد عن ٢٥ سم لاستكمال المنسوب التصميمي لتشكيل الجسر والاكتاف (تسبة تحمل كاليفورنيا لا تقل عن ١٥%) و رشها بالمياه الاصولية للوصول الى اقصى كثافة جافة (٩٥% من للوصول الى اقصى كثافة جافة (٩٥% من الكثافة الجافة القصوي) ويتم التنفيذ طبقا للمناسب التصميمية والقطاعات العرضية انموذجية والرسومات التقصيلية المعتمدة والبند بجميع مشتملاتة طبقا لاصول الصناعة ومواصفات الهيئة العامة للطرق و الكبارى وتعليمات المهندس المشرف. في حالة طلب جهاز الإشراف زيادة نسبة الدمك عن ٩٥ % يحسب زيادة ١ جنية على زيادة نسبة الدمك كل ١ % . مسافة النقل حتى ٢ كم ويتم احتساب علاوة ١٠ جنيه لكل ١ كم بالزيادة	٣٠	W£,YWV,VA\£	1,4.	7 ,£0£,097,1£
	علاوة مسافة النقل ٣١٥,٥ كم	م۳	W£,YWY,VA1£	٤٧٠,٧٥	17,1,٣17,٧.
	علاوة تحصيل رسوم الكارتة والموازين طبقا للانحة الشركة الوطنية	م٣	F£, YFY, YA1£	18,	££0,.91,17
	الإجمالي				Y.,

مدير المشروع المقاول

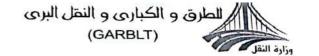
م / محمود الجندي

مدير المشروع المالك

مدير عام المشروعات م محمد حسنی فیاض

رنيس الأدارة المركزية منطقة غرب الدلتا

الاسكندرية - مرسى مطروح عميد مهندس ا



مهله اضافیه واردة من المنطقة الخامسة – فرب الدلتا

- إستكمال تنفيذ أعمال الجسر الترابي والاعمال الصناعية لمشروع القطار الكهربائي السريع 	إسم العمليـــــــــــــــــــــــــــــــــــ
(العين السخنة - مطروح) لتنفيذ اعمال الجسر الترابي (قطاع العلمين - فوكة) المسافة من	
الْكم • • • ٥٣٦, • ١ الكم • • • ٥٣٧, • بطول ١كم اتجاه فوكة .	

إسم الشركة المنفذة: شركة منشأ الزهور للمقاولات العمومية

عقد العملية رقم : (۲۰۲۳/۲۰۲۲/۱۷۰۷)

قيمة التعاقدية : ٢٠ مليون جنيه

تاريخ بدء العمليـــــة: ۲۰۲۳/۳/۲۲

تاريخ النهو طبقا للتعاقد : ٢٠٢٣/ ١١/٢١

الطلوب: مد مده العملية (٦ اشهر) ليصبح تاريخ النهو ٢٠٢٤/٥/٢١

المبررات :- ورد خطاب المنطقة المشرفه بشان مد مده المشروع للاسباب الاتيه :-

- بناءاً على قرار مجلس الوزراء بالجلسة رقم (٢٥٤) بتاريخ ٢٠٢/٨/٣٠ بمد جميع التعاقدات الجارى تنفيذها لمده (١٦شهر) وذلك لمواجهة الاثار السلبية المترتبة على تداعيات الازمات العالمية الحالية والى طلب الشركة المنفذه المقدم بمبررات منحها تلك المدة وموافقة المنطقة المشرفة بعد دراستها الطلب على منحها تلك المده وهي كالتالى:-
 - تاخر التنفيذ بسبب تحرير سعر الصرف

(, ysi 1, p, el) blio

- زيادة تكلفة المواد الخام وارتفاع اسعار نقلها
- · ارتفاع اسعارقطع غيار المعدات وندرة توافرها

التوقيع (التوقيع (الدين مصطفى الواء مهندس/ حسام الدين مصطفى رئيس الهيئة العامة للطرق والكبارى

الممسوحة ضوئيا بـ CamScanner



قائمة الكميات الواردة بالمستخلص ختامي (٣)

عملية :اسناد أعمال الجسر الترابي لمسارالقطار الكهربائي السريع الخط الاول (العين السخنة -العلمين)(قطاع فوكة / مطروح) لتنفيذ أعمال تشكيل الجسور المسافة من الكم ٣٦٠٠٠٠ الى الكم ٥٣٧٠٠٠٠ بطول ١ كم متر اتجاه فوكة

رقم البند و بيانه : (١ - ٣) علاوة تحصيل رسوم الكارتة والموازين طبقا للائحة الشركة الوطنية

تنفيذ: شركة الزهور للمقاولات العمومية

۳٤, ۲۳۷, ۷۸۱ ٤

مقدار العمل السابق:

£ 1	الكميه	بيان الأعمال
	1777,741 £	كميات لم تدرج في المستخلص السابق
76777,7716	لختامية (م٣)	اجمالـــــــــــــــــــــــــــــــــــ

مهندس الهيئة

م / ابراهم الحناوي

مهندس الاستشاري مكتب د/خالد قنديل

م/خالد فوزى

مهندس الاستشاري

مكتب XYZ

م / محمد خلیل

Julois

مهندس الشركة

م / محمود الجندي



قائمة الكميات الواردة بالمستخلص ختامي (٣)

عملية :اسناد أعمال الجسر الترابي لمسارالقطار الكهربائي السريع الخط الاول (العين السخنة -العلمين)(قطاع فوكة / مطروح) لتنفيذ أعمال تشكيل الجسور المسافة من الكم ٢٠٠٠-٥٣٦ الى الكم ٢٠٠٠-٥٣٧ بطول ١ كم متر اتجاه فوكة

رقم البند و بيانه : (۳-۱) أعمال توريد و تشغيل اتربة صالحة للردم مطابقة للمواصفات

تنفيذ: شركة الزهور للمقاولات العمومية

۳٤, ۲۳۷, ۷۸۱ ٤

مقدار العمل السابق:

	الكميه	بيان الاعمال
	1777,771 £	كميات لم تدرج في المستخلص السابق
#£7#V,V A1£	تامیة (م۳)	اجمالي الكمية الذ

مهندس الهينة

م / إبراهيد الحناوى

مهندس الاستشاري مكتب د/خالد قنديل

م/خالد فوزی ر

مهندس الاستشاري مكتب XYZ

م / محمد خلیل

Meis

مهندس الشركة

م / محمود الجندي



قائمة الكميات الواردة بالمستخلص ختامي (٣)

عملية :اسناد أعمال الجسر الترابي لمسارالقطار الكهربائي السريع الخط الاول (العين السخنة -العلمين)(قطاع فوكة / مطروح) لتنفيذ أعمال تشكيل الجسور المسافة من الكم ٢٠٠٠-٥٣٦ الى الكم ٢٠٠٠-٥٣٧ بطول ١ كم متر اتجاه فوكة

رقم البند و بيانه : (٣-١) علاوة مسافة النقل ٣١٥,٥ كم

تنفيذ: شركة الزهور للمقاولات العمومية

م٣ W£, YWV, VA1 £

مقدار العمل السابق:

	الكميه	بيان الاعمال
	1444,441 €	كميات لم تدرج في المستخلص السابق
#£ Y#V , VA1 £	مالــــــــــــــــــــــــــــــــــــ	اج

مهندس الهيئة

مهندس الاستشاري مكتب د/خالد قنديل

م/خالد فوزي

مهندس الاستشاري

مكتب XYZ

م / محمد خليل

Work.

مهندس الشركة

م / محمود الجندي

نموذج رقم ٢



بالمستخلص	الواردة	المحجرية	المو اد	حصر	:	ىشان
	-	44	-	-		· ·

المنطقة	۲		۲	٣	1					1	,						,	اق
	7	1	. 1	1	1					 ./					2	ŗ	ار	لتا

الى السيد المهندس / رئيس قطاع التنفيذ والمناطق

تحية طيبة وبعد ،،،

نتشرف بان نرفق طية المستخلص الختامي الخاص بعملية (اعمال الجسر الترابي والاعمال الصناعية للقطار الكهربائي السريع اتجاه راس الحكمة تنفيذ شركة / شركة الزهور للمقاولات العمومية عقد رقم ٢٠٢/٢٠٢٢/١٧٠٧

يرجي التفضل بالاحاطة والتنبيه باتخاذ ما يلزم مع التفضل من سيادتكم بالعلم ان المواد المحجرية المستخدمة بيانها كالاتى :-

الجهة الحصول على الخامة	الكمية	الوحدة	نوع المادة المحجرية	م
كسارة		م۲	سن	١
٣ محجر المصرية	٤٢٣٧,٧٨١٤	م۲	اتربة	۲
محجر رقم / تصريح / بدون		۲۶	ر مل	٣

هذا وقد تمت مراجعة (البونات المائية / التصريح) للكميات التى تم الحصول عليها من (كسارات / محاجر / تشوينات) معتمدة ووجدت مطابقة للكميات بالمستخلص. يرجى التكرم من سيادتكم بالعلم والاحاطة والتنبية باتخاذ اللازم ،،،

وتفضلوا بقبول فائق الاحترام ،،

التوقيع (١٥٥٥)

عميد مهندس / هانى محمد محمود طه رئيسس الادارة المركزيسة للمنطقة الخامسة - غرب الدلتا

+



المنطقة الخامسة قطاع المشروعات

افادة

بالاشارة لمشروع اعمال الجسر الترابي و الاعمال الصناعية لمشروع القطار الكهربائي السخنة - مطروح) .

العقد رقم: (2023/2022/1707) اتجاه فوكة

في المسافة من 530+600 إلى 537+000

مقاولة شركة: الزهور للمقاولات العمومية

اشراف استشاري: مكتب أد/ خالد قنديل

كمية الاتربة المستخدمة في المشروع: 34,237.7814 m3

يرجي العلم بأنه قد تم توريد المواد المحجرية بالمشروع ببونات رسمية معتمدة و قام استشاري المشروع بمراجعة جميع البونات و التأكد من الكميات المدرجة و ذلك تحت

اشراف المنطقة.

مدير عام المشروعات م/ محمد حسنى فياض مدير مشروع الهيئة م/ ابراهيم المشاوي مدير مشروع الشركة مدير مشر م/ محمود الجندي م/ خا

موهور للمشاه لات العمومية الحرار المدور المسلم الم

رئيس الإدارة المركزية منطقة غرب الدلتا

الاسكندرية - مرسى مطروح

عميد مهندس ا

"هائي محمد محمود طه"



المنطقة الخامسة قطاع المشروعات

كشف اتاوة المحاجر عن كميات المواد التى تم استخدامها

عملية: اسناد اعمال الجسر الترابي لمسار القطار الكهربائي السريع (العين السخنة – مطروح) (قطاع فوكة / مطروح) لتنفيذ اعمال تشكيل الجسور .

المسافة من الكم 000+536 إلي الكم 537+000 بطول 1 كم

العقد رقم: (2023/2022/1707) اتجاه فوكة

تنفيذ : شركة الزهور للمقاولات العمومية

أعمال تم تنفيذها حتى تاريخ 19-5-2024

كمية الاتربة المنفذة بند(3-1) :-

بالمتر المكعب = 34,237.7814 م3

مدير مشروع الشركة

م/ محمود الجندي

مدير مشروع الهيئة م/ ابراهم العناوي

رئيس الإدارة المركزية منطقة غرب الدلتا

الاسكندرية - مرسسي مطروح

عميد مهندس / ص

"هاتي محمد محمود طه"



محضر استلام موقع

مشروع: أعمال الجسر الترابي لمشروع القطار الكهربائي السريع قطاع فوكه - مطروح في المسافة من كم 000+536 الى كم 000+537 بطول 1 كم اتجاه فوكه

> تنفيذ: شركة الزهور للمقاولات العمومية إشراف: المنطقة الخامسة - منطقة غرب الدلتا

> > طبقا للعقد رقم (2023/2022/1707) بتاريخ : 2023/3/21

كل من:-اجتمع إنه في يوم الثلاثاء الموافق 2023/3/22

مدير عام المشرو عات .. الهينة العامة للطرق والكبارى

1 - السيد المهندس / محمد حسنى فياض

2- السيد المهندس /إبراهيم عيد الله الحناوي مهندس العملية - الهيئة العامة للطرق والكباري

مدير مشروع - الزهور للمقاولات العمومية

3- السيد المهندس / على الشربيني

وذلك للمرور على مسار العملية المذكورة عاليه لاستلام الموقع :-

وقد تبين أن الموقع خالياً من العوانق الظاهرية ويسمح بالبدء في التنفيذ وبناء عليه يعتبر تاريخ 2023/3/22 هو تاريخ استلام الموقع وبدء الأعمال بالعملية.

واقفل المحضر على ذلك ووقع الحضور

التو قيعات

رنيس الإدارة المركزية منطقة غرب الدلتا الاسكندرية مرسسى مطروح عليد مهندس ا 👁 "كلتى محمد محمود ظه"

محضر استلام ابتدائي لعملية: أعمال الجسر الترابي لمشروع القطار الكهربائي السريع (قطاع غرب النيل قطاع فوكة/مطروح) لتنفيذ المسافة من الكم ٠٠٠٠ - ٣٦٥ إلي الكم ٢٠٠٠ بطول ١ كم اتجاه فوكة تنفيذ شركة : الزهور للمقاولات العمومية اشراف :المنطقة الخامسة غرب الدلتا(الإسكندرية مطروح) استشاري الهيئة للمشروع : (مكتب د / خالد قنديل)

انه في يوم الأحد الموافق ١٩ _٥ _٢٠٢٤ وبناءً على قرار السيد العميد مهندس/رئيس الإدارة المركزية لمنطقة غرب الدلتا رقم (١٢١) بتاريخ ٢٠٢/٠٩/١ والخاص بأعمال الاستلام الابتدائي للأعمال عاليه.

فقد اجتمعت اللجنة المشكلة من كلاً من :-

(رئيساً)	مدير عام المشروعات بالمنطقة	١) المهندس/ محمد حسنى فياض
(عضواً)	مدير مشروع القطاع من المنطقة	٢) المهندس/إبراهيم الحناوي
(عضوأ)	معمل المنطقة المشرفة	٣)المهندس/عبدالله عبدالمحسن
(عضوأ)	مكتب: (د/خالد قنديل) استشاري الهيئة	٤)المهندس / خالد فوزى
وع (عضوأ)	مكتب (اكس واي زد) استشاري المساحة بالمشر	٥)المهندس/محمد خليل
(عضوأ)	شركة الزهور للمقاولات العمومية	٦)المهندس / محمود الجندي

وقد بدأت اللجنة أعمالها بالإطلاع على ملف العملية وكراسة الشروط والمواصفات وعقد العملية ثم انتقلت اللجنة على الطبيعة للمرور على الأعمال المنفذة ومعاينتها ظاهرياً وتم أخذ عينات أتربة من الجسر لإجراء التجارب الازمة على المنطقة وتحديد نسبة الحيود وقد أسفر الفحص والمعاينة الظاهرية عن التالي:-

الأعمال المنفذة والمطلوب تسليمها أعمال الحفر وأعمال الأتربة لتشكيل مسار الجسر الترابي اولاً: - حالة السطح العلوى للجسر المنفذ: -

الأعمال مقبولة بصفة عامة وتم التأكد من الوصول للمناسب وتحقيق الميول الجانبية للقطاع

ا توصيات اللجنة :-

- ا) علي مندوب معمل المنطقة تحديد مدي الحيود بالعينات عن المواصفة العامة للمشروع وتحديد قيمة الخصم.
- ٢) على السادة استشاري القطاع (د. خالد قنديل) مراجعة الحصر والتأكد من الكميات المنفذة طبقاً لطلبات
 الاستلام وموافة اللجنة بالكميات والتجارب التي أجريت على الأعمال أثناء التنفيذ.
 - ٣) قام مندوب استشاري المساحة بالتأكد علي المناسيب المنفذة طبقاً للتصميم المعتمد.
 - علي استشاري القطاع (د. خالد قنديل) متابعة سلوك الأعمال خلال فترة الضمان وابلاغ الشركة بأي
 عيوب تظهر لأصلاحها فوراً.

وعليه تري اللجنة قبول الأعمال حيث لا يوجد ما يعيق الاستلام الابتدائي للأعمال عاليه ويعتبر تاريخ المحضر هو تاريخ النهو الفعلي وبدء فترة الضمان للأعمال.

وعلي ذلك جري التوقيع.

رئيس الإدارة المركزية منطقة غرب الدلتا الاسكندرية - مرسي مطروح عديد - مهندس / معدد محمود طه "



التقييم الفني

** لمشروع الجسر الترابي لمشروع القطارالكهربائي السريع (قطاع العلمين – فوكة) تنفيذ المسافة من الكم ٥٣٠٠-٥٣٠ إلى ٥٣٠٠-٥٣٧ بطول ١ كم إتجاة فوكة (قطاع العلمين – فوكة)

** تنفيذ: شركة الزهور للمقاولات العمومية

** إشراف : المنطقة الخامسة - قطاع غرب الدلتا

الحسابات المالية ومفصل التقييم وقيمة خصومات مشروع الجسر الترابي لمشروع القطار الكهربائي السريع (قطاع العلمين – فوكة) تنفيذ المسافة من الكم ٥٣٠+٥٣٦ إلى ٥٣٧+٥٣٠ بطول ١ كم إتجاة فوكة (قطاع فوكة – مطروح)

تنفيذ: شركة الزهور للمقاولات العمومية

إشراف: المنطقة الخامسة - قطاع غرب الدلتا

أنه في يوم الخميس الموافق ٢٠٢٤/٠٥/٣٠ وبناء على القرار الإداري رقم (١٢١) بتاريخ ٢٠٢٢/٠٩/١٤ الصادر من السيد العميد المهندس / رئيس الإدارة المركزية -منطقة غرب الدلتا ومحضر الاستلام الابتدائي للعملية المؤرخ في ٢٠٢٤/٠٥/١٩ تم عمل التقييم الفني للعملية عاليه وقد اجتمعت اللجنة المشكلة من كلاً من :-

رئيساً	(مدير عام مشروعات الهيئة)	١ -السيد المهندس / محمد حسني فياض
عضوأ	(ممثل الهيئة)	٢-السيد المهندس / إبراهيم عبدالله الحناوي
عضوأ	(معمل المنطقة المشرفة)	٣-السيد المهندس / عبدالله عبدالمحسن
عضوأ	(مكتب دكتور/خالد قنديل استشاري الهيئة)	٤-السيد المهندس / خالد فوزي
عضوأ	(مكتب XYZ استشاري المساحة للمشروع)	٥-السيد المهندس / محمد خليل
عضوأ	(شركة الزهور للمقاولات العمومية)	٦-السيد المهندس / محمود الجندي



وبعد الأطلاع على محضر الإستلام الابتدائي للعملية وملفات التجارب المعملية تم حساب الخصومات المالية وجاءت كالاتي :-

• الخصم على طبقة الاتربة: لا يوجد خصم

• الخصم على اختبارات الدمك بطبقة التربة: لايوجد خصم

• الخصم على النقص في السمك لطبقة الاتربة: لايوجد خصم

• الخصم طبقا لمحضر الاستلام الابتدائي:-

من الفحص البصري:

- خصم علي سطح الطريق: ١٢٠,٠٠٠ = ٢٠,٠٠٠ جنيهاً

- خصم علي اختبارات التصنيف والتدرج والـ CBR لطبقة الاتربة: لا يوجد خصم

- القيمة المَّالية للخصم للجنة الاستلام الابتدائي: ١٢٠,٠٠٠ جنيهاً (مائة وعشرون ألف جنيهاً لا غير)

التوقيعات:

2 -7

7-1

رنيس الإدارة المركزية منطقة غرب الدلتا الاسكندرية مرسي مطرو

15 10 0 Junia - 120

" هانی محمد محمود طه "

MATERIAL INSPECTION REQUEST









Contractor Company	El . Zhoor .	Company	للمقاو	De	signer	Comp	any				
issued by	Name	Sign			Da	ate		Time			
Contractor	Eng \ Mahmoud Elkhlawy	mohamed Kh	rairs		8-11	-2022					
Contractor Refrence	ZH-8										
Received by	1/11	200		C1	C2	C3	DD	MM	YY	НН	MM
ER	as Ahmed M	okhtar	MIR	kp	EW	CS	8	11	20	22	

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

Descr	iption of Mate	erials	A.F.		ļ	Fill material	resul	ts		
			(-2.5)			536+000		536+1	20	
Locati	ion to be Used		(-5.5)			536+980		537+000		
Locati	ion to be used	3	(-5)		536+980			537+00		
			(-2)		536+440			536+540		
MAR Approval No		ZH	I-8		D	ate				
Suppl	ier Name									
Test Requirement		W		Spe	cification	С	lause			
Reference Photos		Yes	attached / No		Oth	er				
Item	Description	Description		Un	it	Quantity	Arriv	al Date	Note	
1	L.L & P.L &	O.M.C %		m3	3	4100	5-	5-11-2022		
2	Proctor			m3	3	4100	5-	5-11-2022		
3	Classification	n		m3	3	4100	5-	5-11-2022		
4	Seive analys	sis		m3	3	4100	5-	5-11-2022		
5	CBR			m3	3	4100	8-	8-11-2022		
Comn	nents by:					Comments by	/ :			
to (TER Lab) la		s fou		Test Result F (4100 m3)	or Esti	mated Qua	ntaties	Of about
Organ	nisation N	lame	-	APPR	Sign	STATUS		Date		A-AWC-R
Contractor ENG : Mahmoud Elkhlaw		vy		inged Khair	7	8/11/20	022	A S		
QA/QC* AhmedADoZm			id	id /			8/11/20	022	A //	
GARB	**	HUSSI	IN FOUAD		Lauren			8/11/20	022	A
Employers Representative 25 Ahmed Me		øΚ	ht	on		8-11-2	22	J/A		

^{*} Designer

^{**} Alignment / Bridges: Culvert Only







Location Name	Cor	ntractor Compa	inv y					Design	er Compa	any	
Electric express	EL ZH	OOR COM	PAN	Y					k.k		
	Name	Sign	Date 8-11-2022				Time				
Issued by Contractor	Fng/ MAHMOUD I am all am all Vianil					hairy					
Contractor Reference	Z	H-8								1	
772-22	A1 4			C1	C2	C3	DD	M	YY	НН	M
Received by ER	as Ahmed	Mokhtar	MAR	kρ	EW	CS	8	11	202	-2	

Description	n of Materials	Lower and Middel- Emb	ankment Soil (A-1-b)			
Location Of Stock		536+300					
Item	Specification	Test requirement	Test result attach	ment Remarks			
1	ASTM D 75	Aggregate Sampling	According to specific	cations			
2	ASTM C 136	Sieve Analysis	According to specific	cations			
3	ASTM D 1440	Passing Sieve, No 200	15 %				
4	ASTM D 4318	Atterberg limit	Non. P				
5	ASTM D 2974	Moisture content	7 %				
6	ASTM D 1557	Modified proctor	2.16				
7	ASTM D 1883	CBR	56.00 %				
Comment			Comments by:				
A	pproved	as per a	Hacheel.				

	Α	PPROVAL STATUS		
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG: MAHMOUD ELKHLAWY	mohamyed Khair J	8-11-2022	A ST
QA/QC *	Ahmed Also Zai	d for	8-11-2022	A
GARB**	HUSSEIN FOUAD	Afunen	8-11-2022	A
Employers Representative	de Ahmed M	okhtar	8-11-622	VA

^{*} Designer ** Alignment/Bridges: Culvert only



From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA To MARSA MATROUH

From Station 504+000 To Station 568+177

Al Nuby Central Lab



PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	05/11/2022	Code			
LOCATION	K.P 536+300	70.0	ZONE	536+000	537+000
NAME COMPANY	AL Zohour	ZH-8			
1-visual inspection test				Embankment	1.5

2-Gradient test

A-gradation of bulk mate	<u>erials</u>			SAMPLE V	VEIGHT [g]	3241	10.00	gm		table classify
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS		soil classify
Mass retained (g)	0.0	2980.0	2560.0	2720.0	3370.0	2188.0	2150.0		9.3	A-1-b /
Cumulative Retained (g)	0.0	2980.0	5540.0	8260.0	11630.0	13818.0	15968.0		PRO	2.16
Cumulative Retained %	0.0	9.2	17.1	25.5	35.9	42.6	49.3		wc	7.00
Cumulative Passing %	100.0	90.8	82.9	74.5	64.1	57.4	50.7		CBR	56.00 /

B-soft material gradation	<u>1</u>			WT.OF sample	500.00	gm
sieve size	10	40	200			
Cumulative Retained (g)	31.00	135.00	352.00			
Cumulative Retained %	6.20	27.00	70.40			
Cumulative Passing %	93.80	73.00	29.60			

C-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	100.0	90.8	82.9	74.5	64.1	57.4	50.7	47.6	37.0	15.0

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

Contractor

معمل النوبي المركزي معمل فوكا - مطروح

Consultant



From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH

From Station 504+000 To Station 568+177



PROCTOR TEST

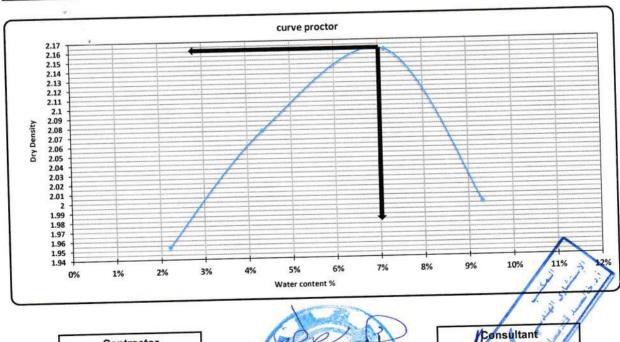
TESTING DATE:	5/11/2022	Code			507.000
LOCATION	K.P 536+300	ZH-8	ZONE	536+000	537+000
NAME COMPANY	AL Zohour				

Weight of empty mold :	6062.0
Mold Volume:	2103.0

MAX Dry Density	2.16
Water content %	7

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10261.0	10615.0	10928.0	10652	
AWARASION SILES PRINCE DURING THE	4199.0	4553.0	4866.0	4590.0	
(01)1765 1474-1764 - Door	1 997	2.165	2,314	2.183	
Wt. WET SOIL Wt. Density	1.997		10000000	2.183	

Dry Density	1.	953	2.	075	2.	159	1.	997	
AV.Water content %	2.2%		4.3%			7.2%		3%	
Water content %	2.4%	2.1%	4.5%	4.2%	7.0%	7.3%	9.5%	9.1%	
Wt. Of dry soil	93.6	115.9	91.0	85.9	81.7	88.7	99.1		
Wt. Of water	2.2	2.4	4.1	3.6	5.7	6.5	9.4	97.4	
Wt. Of dry soil & tare	147.8	147.6	145.9	146.4	144.3	143.5	140.6	dia ration al indicate	ENGLISH DE
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	
Tare wt.	54.2	31.7	54.9	60.5	62.6	54.8	41.5		
Tare No.	22	15	21	20	90	26	45	43.7	



Contractor

معمل الجابي المركزي







California Bearing Ratio TEST

Testing Date :	8/11/2022	Code			
Location :	K.P 536+300	Code			
Company Name	AL Zohour	ZH-8	Zone	536+000	537+000

-: Test Results

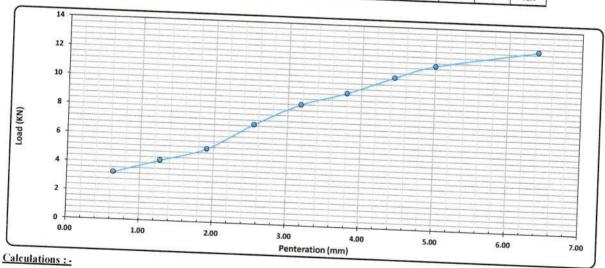
Compaction % for Mold	
Mold No.	3
Mold Vol. (cm ³)	2025
Mold WT. (gm)	5034
Mold WT. + Wet WT. (gm)	9701
Wet WT. (gm)	4667
Wet Density (g/cm3)	2.305
Dry Density (g/cm^3)	2.151
Proctor Density (g/cm3)	2.160
Compaction %	99.6

Tare No.	40
Tare WT. (gm)	46.4
Tare WT, +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	143.1
Water WT. (gm)	6.9
Dry WT. (gm)	96,7
Moisture Content %	7.1

Swelling					
Mold No.	3				
Date	8/11/2022				
Intial Height (mm)	3.00				
Final Height (mm)	3.00				
Difference	0				
Sample Height (mm)	12.00				
Swelling Ratio %	0%				

Loading Reading:

Penteration (mm)	0.64	1.27	1.01						
Load Death	Day of the second	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.4
Load Reading (mm)	0.11	0.14	4 0.17	0.23	0.28		E86335-01		0.40
Load (KN)	2.2		E COLUMN TO SERVICE STATE OF THE SERVICE STATE OF T	0.20	0.28	0.31	0.35	0.38	0.4
John (ICH)	3.3	4.2	5.1	6.9	8.4	9.3	10.5	11,4	12.



(mm) (Kn) (Ib) (%) (%) Compaction 2.50 6.90 13.4 51.7% (%) (%)		
2.50 6.90 13.4 51.7% (%) (%)	(mm)	CBR
2.50 6.90 13.4 51.7%	(Mar) (Kn	CBK
51,770	2.50 6.90	At Preent 98%
5.00 11.40 20.0 100	5.00	50,9%
20.0 20.0 56.9% 100 98	2.00	56.0%

Lab. Specialist

Name: Sign: معمل النوبي المركزي مطاع فوكا - مطروح











	EL ZHOOR Sym		Designer Company			ny	K. K			
Name	125			Date	9			Ti	me	
ontractor El kahlawy		M.		23-2-2023						
de Ahmed	Uskh ton	STR	C1	C2	C3	00	MM	YY	НН	MM
	Eng : Mahmo El kahlawy	Eng : Mahmoud El kahlawy	Eng: Mahmoud El kahlawy	Name Eng: Mahmoud El kahlawy	Name Eng: Mahmoud El kahlawy Date 23-2-26	Name Eng: Mahmoud El kahlawy Date 23-2-2023	Name Eng: Mahmoud El kahlawy Date 23-2-2023	Name Eng: Mahmoud El kahlawy Date 23-2-2023	Name Eng: Mahmoud El kahlawy Date Tile 23-2-2023	Name Eng: Mahmoud El kahlawy Date Time 23-2-2023

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

ZHR-3-72-PL-6 NB: Package 1 Only (Package 2 via Aconex) THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW **Description of Test Materials** Plate load test for (Middle embankment) **Location of Test** 536 + 000536 + 080- 1.5 Specification Item Location Test Requirement Test result attachment Remarks 536 + 050DIN 18134 Ev₂ ≥ 40 MPa Ev_2 263.87 MPa Approved

Comments by:			Comments by:		
* Approved	as	per	attached.		

		APPROVAL STATUS		
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng Mahmoud El kahlawy	11 61/2	23-2-2023	A
QC/QA	-	4	23-2-2023	A DE LA
GARB*	Eng. Hussein Fouad	Howkin	23-2-2023	A
Employers Representative	de Ahmed 1	Tokhton	23-2-2023	A

^{*} Alignment / Bridges: Culvert Only









			than 24			
EIPT of NOTIF	ICATION - Minimum	Notice Period not less	shown			
e Work described belo	w will be complete and ready	for inspection at planner	Designer Cor	npany*	KK CONSU	JLI.
Contractor	EL. ZHO	OR. COMPANY			Time	
Company	Name	Sign	Date 18 - 2 -	2023	0 .	< 9
Issued by	Eng:	and a			2.	
Contractor	Mahmoud Elkhlhwy		C1 C2	C3 DD	MM YY	HH MM
Received by Employers	M. A	18 23023 UI	R K.P536 EW	CS 18	2 2023 Kp XXX	9 S9
Representative	S1 to S21	Den	D1 to S3 ot Reference	For Kil	ometer point on	ly Start Km is used
CODE-1	Station Reference	Бер	Work Activity			
CODE - 2		Sub	Element of Activity			
CODE - 3						
	F	XPLANATION OF WO	RK TO BE INSPEC	TED		
		Eleme			Item	
Desc	ription		THE RESERVE TO SERVE	From	St (536+000)	to (536+080)
Earth	Works	GEIII (-1	33			
				ned Inspection	Time	
	INSPECTION	N DETAILS The Following w	ill be ready at the rial	Planned II	nspection Ti	me
PI	anned Inspection D)ate		11	59	
	18 9-	0, 93				
	10 - ~		i i dad as as	propriate		
	CON	MPLIANCE EVIDENCE	Calibration At	ched	Other as inc	dicated
Checklist Attached	□ Test	I Mesuits / interes		taciica_	MS Refere	
Drawing Ref	ference	ITP Reference	2			
Diawingite						
					Mate	orial
		Surv	ev		Iviate	FILAI
Ci	VII			D.K	Hal	du
11	/.	Levels Are APA	yoveo	21	7	
Hoy	-dy	Cer Coo I	~ 0	-		110-1
4	1	Almos D&Me		5our	.d Come,	Accepted
Visual inspec	11000	71100	122	01.	L 1	
ace	repted	Lill vice the	مشروع القطاراك	pho	reloadi	
					Annual	Please Tick
					Approval	Not Atten
NSPECTION RESUL					Status	NOC Accent
	••••	Sign	Date	Time	A-AWC-R	
Organisation	Name					
Contractor	M. Elkah	Wy ~ ~		المكانية	N. IN.	
QA/QC*		-	S	معارق المندسي	4	
GARB**		00	·			
Employers						
Representative No	otes	2 7000			^	
Employers Representative Sig	m M.A	282			7	

^{*} Designer

^{**} Alignment: Bridges: Culvert





-1.5





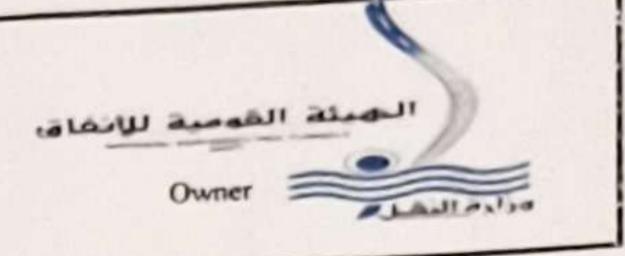


Plate Load Test Results

Company Name Location Taste Date Layer level

الزهور 536+300 To 536+000 23-2-2023

Station

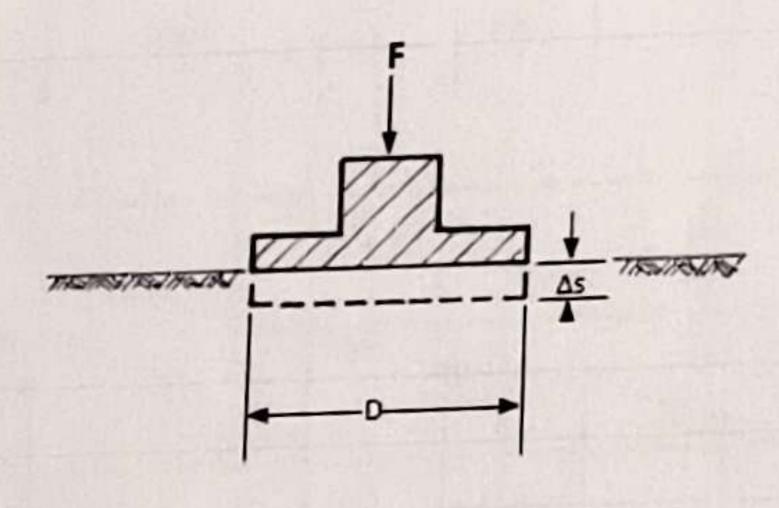
536+050

PL-6-1

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a

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



F = load

 $\Delta s = settlement$

D =diameter of the plate

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

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

300mm Diameter =

meter =	300m	m								Avg.
Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	11.95	10.27		0.000	0.000		0.000
1.000	2.4	0.707	0.01	11.77	10.19		0.180	0.080		0.130
2.000	18.8	5.652	0.08	11.49	10.10		0.460	0.170		0.315
0.080	37.7	11.304	0.16	11.35	10.01		0.600	0.260		0.430
4.000	58.9	17.663	0.25	11.05	9.93		0.900	0.340		0.620
5.000	77.7	23.315	0.33	10.81	9.81		1.140	0.460		0.800
6.000	98.9	29.673	0.42	10.67	9.69		1.280	0.580		0.930
7.000	117.8	35.325	0.50	10.47	9.58		1.480	0.690		1.085
8.000	58.9	17.663	0.25	10.53	9.64		1.420	0.630		1.025
9.000	29.4	8.831	0.12	10.71	9.71		1.240	0.560		0.900
9.000	2.4	0.707	0.01	11.08	9.94		0.870	0.330		0.600
10.000	2.4	0.707	0.01	11.08	9.94		0.870	0.330		0.600
11.000	18.8	5.652	0.08	10.91	9.82		1.040	0.450		0.745
12.000	37.7	11.304	0.16	10.83	9.71		1.120	0.560		0.840
13.000	58.9	17.663	0.25	10.72	9.59		1.230	0.680		0.955
14.000	77.7	23.315	0.33	10.63	9.50		1.320	0.770		1.045
15.000	98.9	29.673	0.42	10.58	9.41		1.370	0.860		1.115

		S	ΔS	Δσ	
0.7 σ1	0.35	0.79438	0.37875	0.2	
0.3 σ ₁	0.15	0.41563	0.57075	0.2	
0.7σ2	0.35	1.06056	0.17054	0.2	
0.3σ2	0.15	0.89001	0.17034	0.2	
D (mm)	300				
Ev ₁	118.81				
Ev ₂	263/87				
Area (Sq.m)	0.07065				

	THE MINES	
Ev2/Ev1	2.22	

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

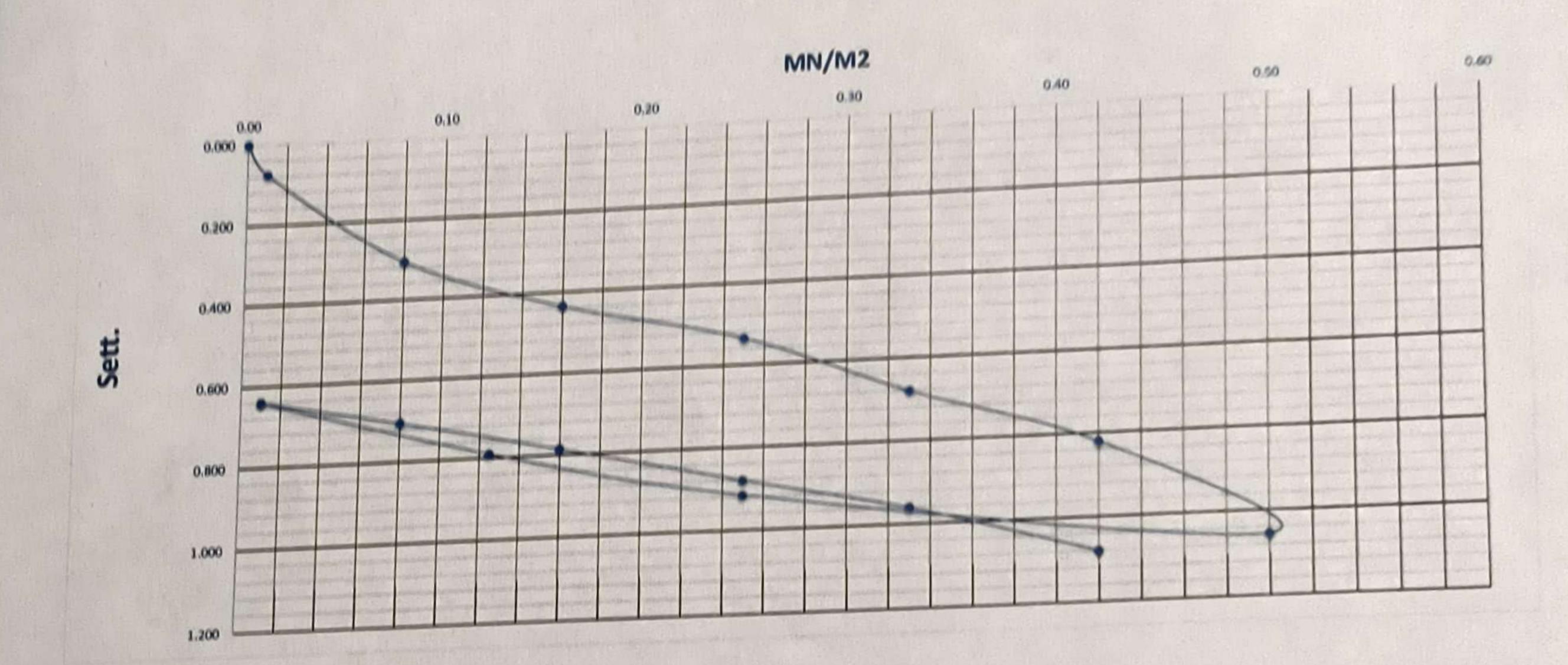
= deformation modulus

= load increment Δσ

= settlement increment As

= diameter of the plate, generally 0.30 m D

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



Lab. Specialist

Name:

Sign:

THE STATE OF THE PARTY OF THE P

Name:
Sign:

Sign:

Journal

Journ

Consultant Engineer

REQUEST









Contractor Company	El . Zhoor .	Company	للمقاوة	Des	igner	Comp	any				
Issued by Contractor	Eng \ Mahmoud Elkhlawy	mohamed K	hairy			ate 2022		Time			
Contractor Refrence	ZH-9										
Received by ER	as Ahmed Ma	Khtar	MIR	CI KP	EW EW	C3	13	MM 	20	HH 27	MM

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

Descr	iption of Materials		Fill material results							
			(-2.5)			536+280	536+4	140		
Locati	on to be Used		(-5.5) (-5)			536+540	536+6	540		
LUCALI	on to be osed					536+940	536+9	960		
			(-2)			536+280	536+3	360		
MAR Approval No				ZH	-9		Date			
Suppl	ier Name		- Anna							
Test Requirement				Specific	cation	Clause				
Reference Photos Yes attached / No		tached / No		Other						
Item	Description			Uni	t	Quantity	Arrival Date	Note		
1	L.L & P.L & O.M.C	%				4900	11-11-2022			
2	Proctor			m3		4900	11-11-2022			
3	Classification			m3		4900	10-11-2022			
4	Seive analysis			m3		4900	10-11-2022			
5	CBR					4900	13-11-2022			
Comn	nents by:				Co	mments by:				
to (ole has been taken for E <mark>l Mahjoub CENTER</mark> ed meet the specifico	Lab) la	b and the resu		1012000	est Result Fo	or Estimated Qua	antaties Of about		

founded meet the specificontions and accepted .

	APP	ROVAL STATUS		
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG : Mahmoud Elkhlawy	mohumed Khairy	13/11/2022	A
QA/QC*	omar youssef	omar youssef	13/11/2022	A
GARB**	HUSSEIN FOUAD	Hunten	13/11/2022	A
Employers Representative	de Ahmed Mox	hten	13-11-2020	A
Designer				

File: MIR - zh 9

Page 1 of 1

^{**} Alignment / Bridges: Culvert Only

REQUEST







Location Name	Co	intractor Comp	pany.					Desig	ner Compa	anv	Ü
Electric express train	EL Z	ZHOOR COMPANY				k.k				,	
Issued by	Name	Sign		Dat	e			Time	7867.236	4135	
Contractor	Eng/ MAHMOUD ELKHLAWY	mohumed K)	rairy	13-11-2022		2			2.150.2		
Contractor Reference	Z	H-9									
Received by ER	as Ahmed M	1-11-		C1	C2	С3	DD	M	YY	нн	M
	I rinm Call	OKKTO	MAR	KP	EM	CS	13	11	202	2	100

Description	n of Materials	N	1iddel- Emban	kment	Soil (A-1-a)	
Lo	ocation Of Stock			536+	•	
Item	Specification	Test requirement Test result attachment		Remarks		
1	ASTM D 75	Aggregate Sampling		According to specifications		Remarks
2	ASTM C 136	Sieve Analysis		According to specifications		
3	ASTM D 1440		eve, No 200	13.7 %		
4	ASTM D 4318		erg limit		5.50 %	
5	ASTM D 2974	At the second se	e content		6.20 %	
6	ASTM D 1557	Modifie	d proctor		2.17	
7	ASTM D 1883		BR		68.30 %	
Comments	s by:			Commen		
AF	proved	as	per	att	acheel.	

		APPROVAL STATUS		^
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG : MAHMOUD ELKHLAWY	mohamed Khair J	13-11-2022	11 1
QA/QC *	omaryoussel	omar youssel	13-11-2022	A
GARB**	HUSSEIN FOUAD	Hunren	13-11-2022	A
Employers Representative	as Ahmed 1	Jokh tar	13-11-2022	A

^{**} Alignment/Bridges: Culvert only





From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARSA MATROUH

From Station 504+000 To Station 568+177



PARTICLE SIZE DISTRIBUTION OF SOIL



TESTING DATE:	10-11-2022	code			
LOCATION	K.P (536+300)	ZH-9	ZONE	536+000 _ 537+000	
NAME COMPANY	ALZOHOUR	211-9			

1-visual inspection test

Embankment 4800 m2

2-Gradient test

A-gradation of bulk mate	erials			SAMPLE V	VEIGHT [g]	2492	9.00	gm		table classify
sieve size	2	1.5	1	4/3	2/1	8/3	#4	PASS		soil classify
Mass retained (g)	434.0	2386.0	2786.0	3080.0	3290.0	1745.0	2435.0		Ī	A-1-a 🗸
Cumulative Retained (g)	434.0	2820.0	5606.0	8686.0	11976.0	13721.0	16156.0		PRO	2.17
Cumulative Retained %	1.7	11.3	22.5	34.8	48.0	55.0	64.8		wc	6.20
Cumulative Passing %	98.3	88.7	77.5	65.2	52.0	45.0	35.2		CBR	68.30

3-soft material gradation	1			WT.OF sample	500.00	gm
sieve size	10	40	200			
Cumulative Retained (g)	85.00	170.00	305.00			
Cumulative Retained %	17.00	34.00	61.00			
Cumulative Passing %	83.00	66.00	39.00			

C-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	98.3	88.7	77.5	65.2	52.0	45.0	35.2	29.2	23.2	13.7 🗸

ATTERBERG	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)
LIMTS	22.90%	17.30%	5.50%

Centractor

Consultant

omar yourself





From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH

From Station 504+000 To Station 568+177



PROCTOR TEST

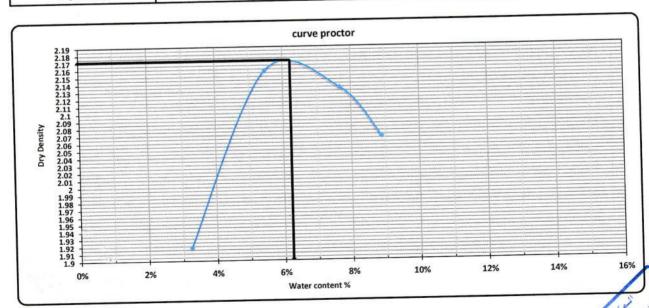


TESTING DATE:	11\11\2022	code		
LOCATION	K.P (536+300)	ZH-9	Station	536+000 _ 537+000
NAME COMPANY	ALZOHOUR	211-0		

Weight of empty mold :	6089.0	MAX Dry Density	2.17
Mold Volume:	2123.0	Water content %	6.20%

trial no :	1	2	3	4	5
Wt. Of Mold+ wet soil	10294.7	10920.9	10967.7	10868	
WT. WET SOIL	4205.7	4831.9	4878.7	4778.9	
Wt. Density	1,981	2.276	2.298	2.251	

Tare No.	2	2	5	6	20	12	7	6	
Tare wt.	34	28	32	34	30	28	33	29	
Wt. Of wet soil & tare	150.0	155.0	155.0	167.0	155.0	176.0	167.0	198.0	
Wt. Of dry soil & tare	147.0	150.3	148.8	159.9	146.2	165.3	156.7	183.4	
Wt. Of water	3.0	4.7	6.2	7.1	8.8	10.7	10.3	14.6	
Wt. Of dry soil	113.0	122.3	116.8	125.9	116.2	137.3	123.7	154.4	
Water content %	2.7%	3.8%	5.3%	5.7%	7.6%	7.8%	8,3%	9,4%	
AV.Water content %	27503982	3%	5.	5%	7.	7%	8.	9%	
Dry Density	1	919	2.	158	2.	134	2.	067	



معدل اختبارات وإبنات التربة القطار السرية - فـ وكم - مطبوح المحدود consultant omar yourse

شركسة الزمسور للمقاولات العمومية





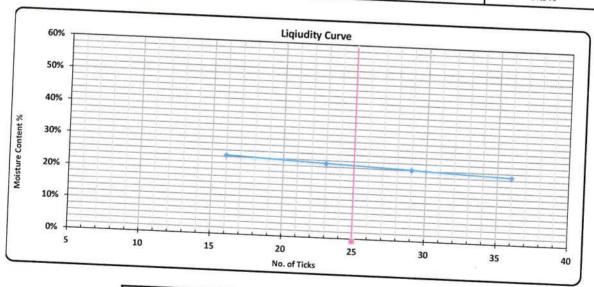
Plasticity and Liquidity Test -Atterberg Limits



Testing Date:	11 11 2022			desired fails
8 - 11.5	11-11-2022	Code:		
Location:	K.P (536+300)		St. ii	
NAME COMPANY	ALZOHOUR	ZH-9	Station	536+000 - 537+000

Testing Results :-

Test		Liqit	ıd Limit		Plast	da Y to to
No. of Ticks	16	23	29		1 1881	tic Limit
Tare No.	20		2.9	36	-	-
Tare WT. (gm)		7	21	25	5	23
	34.23	35.13	21.99	33,97	18.04	
Tare WT. + Wet WT. (gm)	44.76	51.29	32.33			10.4
Tare WT. + Dry WT. (gm)	42.69	40.25		42.61	18.90	11.34
Water WT. (gm)		48.25	30.45	41.12	18.77	11.21
Dry WT. (gm)	2.07	3.04	1.88	1.49	0.13	0.12
	8.46	13.12	8.46	7.15		0.13
Moisture Content %	24.5%	23.2%			0.73	0.74
	Average %	23,270	22.2%	20.9%	17.8%	16.8%
	tverage 76				17.3	3%



	Manager and the second	
L.I.	P.L	P.I
22.9%	17.3%	A DOMESTIC OF THE STATE OF THE
		5.5%

Lab. Specialist Name:

Lab. Engineer

Consultant Engineer Name:







California Bearing Ratio TEST



Testing Date :	13/11/2022	Code		
Location :	K.P(536+300)	ZH-9	Station	536+000 _ 537+000
NAME COMPANY	ALZOHOUR	Zn-9		

Danile

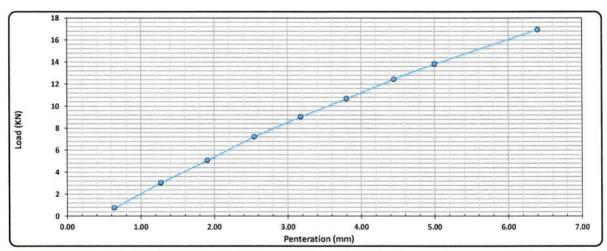
Compaction % for Mold	
Mold No.	55
Mold Vol. (cm³)	2151
Mold WT. (gm)	15700
Mold WT. + Wet WT. (gm)	20473,58
Wet WT. (gm)	4774
Wet Density (g/cm ³)	2,219
Dry Density (g/cm^3)	2.087
Proctor Density (g/cm^3)	2.130
Compaction %	98

Tare No.	5
Tare WT. (gm)	31
Tare WT. +Wet WT. (gm)	233
Tare WT. +Dry WT. (gm)	221
Water WT. (gm)	12.0
Dry WT. (gm)	190.0
Moisture Content %	6.3

Swelling	
Mold No.	55
Date	13/11/2022
Intial Height (mm)	3.00
Final Height (mm)	3.10
Difference	0.100
Sample Height (mm)	120.00
Swelling Ratio %	0.08%

Loading Reading:

Penteration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (kg)	78.00	310.00	520.00	738.00	923.00	1090.00	1270.00	1410.00	1728.00
Load (KN)	0.8	3.0	5.1	7.2	9.0	10.7	12.4	13.8	16.9



Calculations: -

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(Ib)	(%)	(%)	(%)	At Preent 98%
2.50	7.23	13.4	54.2%	99		53.6%
5.00	13.82	20.0	69.0%	99	98	68.3%

Lab. Specialist

Name:

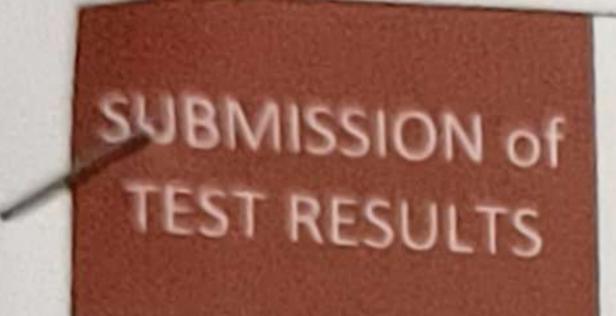
Sign:

معدل اصبارات واسات التربة : Sign: معدود المحدود المحد

Consultant Engineer

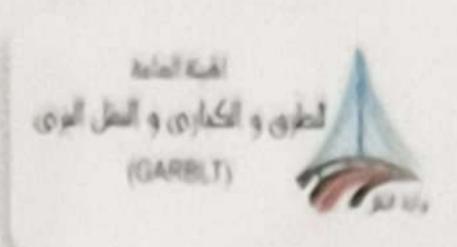
Name: omar goussel

Sign: onger you's











Contractor	ELZH	Mahmoud H	اشر	Desig	ny	K. K				
Issued by Contractor El kahlawy	Sign		Date				Time			
Received by ER	Name Eng: Mahmoud El kahlawy Designer Company K. K 23-2-2023									

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

ZHR-3-73-PL-7 NB: Package 1 Only (Package 2 via Aconex) THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW **Description of Test Materials** Plate load test for (Middle embankment) **Location of Test** 536 + 200536 + 300 - 1.5 Item Location Specification **Test Requirement** Test result attachment Remarks 536 + 250DIN 18134 Ev₂ ≥ 40 MPa 369.91 MPa Ev_2 Approved

Comments b	y:		Comments by:
* APProved	as	Per	attached.

		APPROVAL STATUS		
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng Mahmoud El kahlawy	[El-	23-2-2023	A
QC/QA			23-2-2023	ری البندسی سد قندیسل
GARB *	Eng. Hussein Fouad	Harrison -	23-2-2023	A
Employers Representative	de Ahmed	Mokhtan	23-2-2023	A

^{*} Alignment / Bridges: Culvert Only









Work described below	C C CONTINUES IN ARTIST FO	andular land									
ontractor	To the te and h	OOR . CT	MPANY	Design	er Cor	npany*		KK (CONSI	JLT.	
sued by	Name	Sign	11:27	Date		Time					
ontractor	Eng: Mahmoud Elkhl	1 800.7	2	The second second	2-2-	2023		11	:2	?	
eceived by mployers epresentative	M.A	227	3023 UI	C1 R K.P536	C2 EW	C3	DD 22	MM 2	YY 2023	HH /)	MM 2 >
CODE-1	S1 to S21 Station Refere	D1 to S3 ot Reference Work Activi		F	or Kild		Kp XXX		Km is use		
CODE - 3			Sub	Element of							
		EXPLAN	ATION OF WO	RK TO BE II	USPEC	TFD					
Des	cription		Eleme		13. 20				Item		
Eart	h Works		Fill (-1	.5)			rom S	it (536	+200) t	01586	-300 A
	Planned Inspecti	TION DETA	ILS The Following v	vill be ready at							
	22 - 2					Plann	ad 1m	anaati			
		- \ / -	0 0			/ armi	ea in	specu	ion Tim	ne	
		- 10	23			13	ed in	Special 27	ion I in	ne	
Charklist Attach		COMPLIAN	NCE EVIDENCE		ed as ap	13 propriate		Special 2	ion I in	ne	
Checklist Attache	ed 🗆	COMPLIAN	NCE EVIDENCE ts Attached□	Calibration	ed as ap	13 propriate	-	Other	as indi	cated]
Checklist Attache Drawing R	ed 🗆	COMPLIAN	NCE EVIDENCE	Calibration	ed as ap	13 propriate	-	Other		cated]
Drawing R	eference	COMPLIAN	NCE EVIDENCE ts Attached□	Calibration	ed as ap	13 propriate	-	Other	as indi	cated	1
Drawing R	ed 🗆	COMPLIAN	NCE EVIDENCE ts Attached□	Calibration	ed as ap	13 propriate	-	Other MS F	as indi	cated	1
Drawing R	eference	COMPLIAN	ICE EVIDENCE ts Attached ITP Reference	Calibration	ed as ap	13 propriate	-	Other MS F	as indi	cated	
Drawing R	eference	COMPLIAN Test Resul	Surv	Calibration	ed as ap	propriate	-	Other	as indi- Referen	ial	
Drawing R. Visual in	ed	COMPLIAN Test Resul	Surv	Calibration	ed as ap	propriate	lade	Other	as indi- Referen	ial	
Drawing R	ed	COMPLIAN Test Resul	Surv	Calibration	ed as ap	propriate	lade	Other	as indi- Referen	ial	

Organisation	Name	Sign	Date	Time	Status A-AWC-R	Not Attend
Contractor	Mahmoud Elkhihwy	200			A-MOOC-N	
QA/QC*				مكتب	1 2	
GARB**		1		ك الهندسي		
Employers Representative Notes			A A A		1//	
Employers Representative Sign	M·A	28 202	3		A	

^{**} Alignment: Bridges: Culvert











Contractor Consultant

Plate Load Test Results

Company Name Location Taste Date Layer level

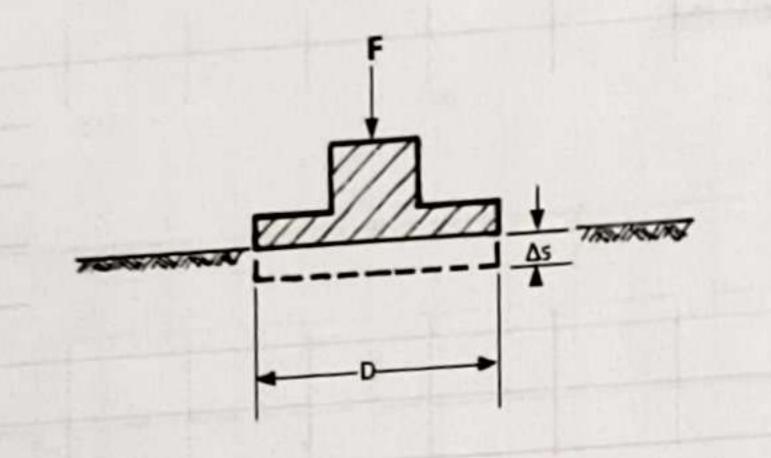
الزهور 536+300 To 536+000 23-2-2023 -1.5

536+250 Station

EQUIPMENT AND TEST PROCEDURE:-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a

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



F = load

 $\Delta s = settlement$

D = diameter of the plate

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

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

eter =	300mm		Strace	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	5
Loading	Load	Load	Stress		mm	mm	mm	mm	mm	1
Stage No.	Bar	KN	MN/M2	mm	TO BE TO SHADOW		0.000	0.000		0.
0.000	0.0	0.000	0.00	19.73	10.03			0.280		0
1.000	2.4	0.707	0.01	19.22	9.75		0.510			0
115 mm (115 mm)	18.8	5.652	0.08	18.93	9.57		0.800	0.460	SUBIL.	100
2.000		11.304	0.16	18.53	9.47		1.200	0.560		0
0.080	37.7	100000000000000000000000000000000000000	0.25	18.31	9.38		1.420	0.650		1
4.000	58.9	17.663	201223	18.01	9.25		1.720	0.780		1
5.000	77.7	23.315	0.33		9.13		2.060	0.900	-	1
6.000	98.9	29.673	0.42	17.67			2.250	1.060		1
7.000	117.8	35.325	0.50	17.48	8.97	STATE OF THE PARTY		0.930		1
8.000	58.9	17.663	0.25	17.51	9.10		2.220	DESCRIPTION OF THE PARTY OF THE		
9.000	29.4	8.831	0.12	17.61	9.27		2.120	0.760	100	
9.000	2.4	0.707	0.01	18.15	9.51		1.580	0.520		1
	2.4	0.707	0.01	18.15	9.51		1.580	0.520		1
10.000		5.652	0.08	17.91	9.43		1.820	0.600		1
11.000	18.8	The state of the s	0.16	17.82	9.38		1.910	0.650		1
12.000	37.7	11.304	100000000000000000000000000000000000000	The state of the s	9.30		2.060	0.730		1
13.000	58.9	17.663	0.25	17.67			2.150	0.800	3500	1
14.000	77.7	23.315	0.33	17.58	9.23					\vdash
15.000	98.9	29.673	0.42	17.48	9.18		2.250	0.850	Section 1	1

1		S	ΔS	Δσ	
0.7 σ ₁	0.35	1.32688	0.47812	0.2	
0.3 σ ₁	0.15	0.84875	0.47012		
0.7σ2	0.35	1.49167	0.12165	0.2	
0.3σ2	0.15	1.37002	0.12100		
D (mm)	300				
Ev ₁	94.12				
Ev ₂	369.91				
Area (Sq.m)	0.07065				

Ev2/Ev1	3.93	

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

= deformation modulus E_{ν}

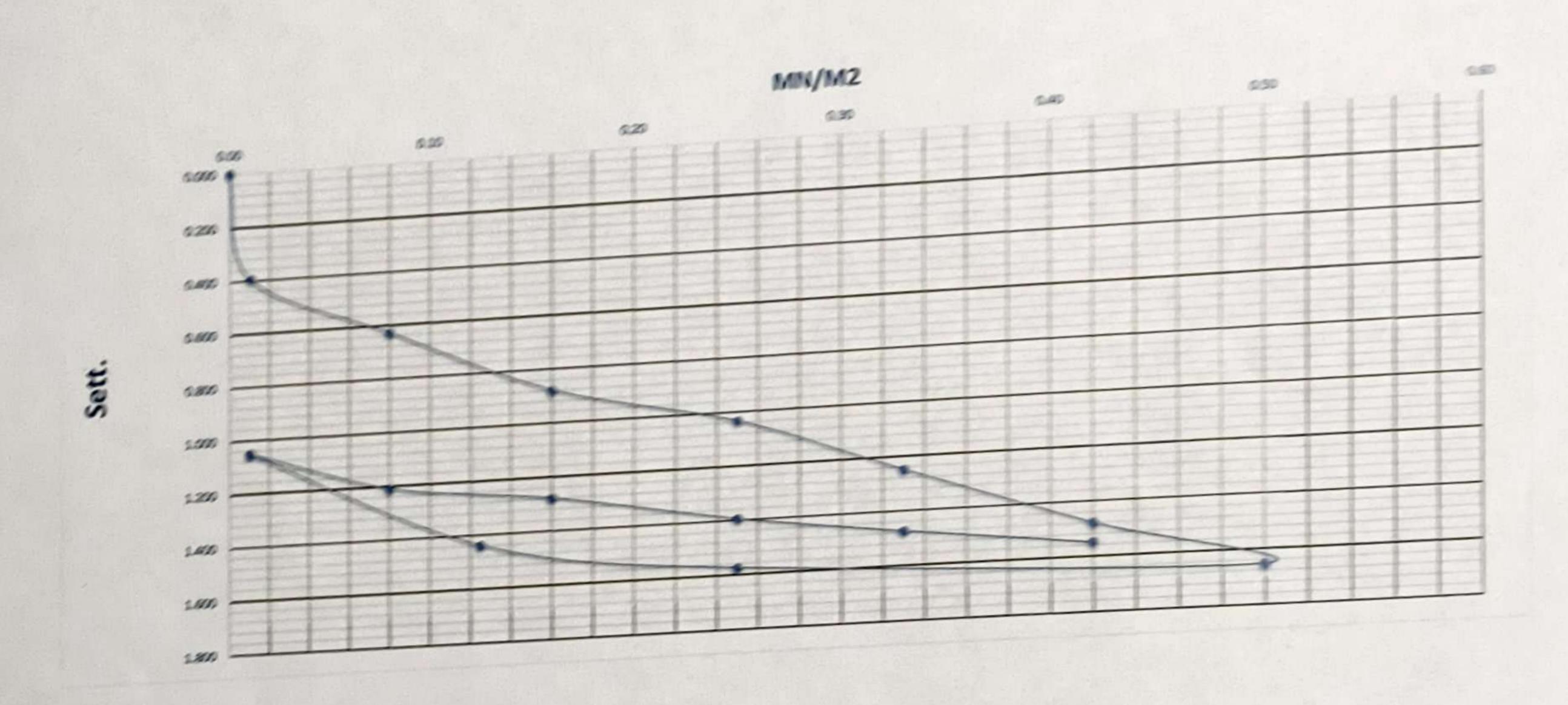
= load increment Δσ

= settlement increment 1s

= diameter of the plate, generally 0.30 m D

PL-7-1

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



Lab. Specialist

Name:

Sign:

(September 1)

Name:
Sign:

المحددار المديريع معمل البويي المركري معمل البويي المركري معمل البويي المركري Name: 40455 4 2000

Sign :

231212003 231212003

MATERIAL INSPECTION REQUEST









Contractor Company	El . Zhoor	. Company	للمقاوية	Des	signer	Comp	any		***************************************		
Issued by Contractor	Eng \ Mahmoud Elkhlawy	mohamed l	Khairy			ate -2022		Time			
Contractor Refrence	ZH-10										
Received by ER	25 Ahmed Ma	Ishtan	MIR	CI KP	C2	CS	DD \	12	70	нн Э 2 Т	MM

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

Descr	iption of Mate	rials				Fill ma	terial	results		
Locati	ion to be Used		536+360 to 536- 536+640 to 536- 536+880 to 536- 536+900 to 536- 536+980 to 537- 536+940 to 536-	+680 (+900 (+920 (+000 (-2) -3.5 -4) -4.5))	536+58 536+96 536+88	50 to 536+580 (80 to 536+680 (40 to 537+000 (00 to 536+920 (80 to 536+900 (40 to 536+880 (-1.75) -4) -3.5) -3)	
MAR	MAR Approval No			ZH	-10			Date		
Suppl	ier Name									
Test R	Requirement				Spe	ecificatio	on	Clause		
Refer	ence Photos		Yes attached / N	lo	Oth	her				
Item	Description			Un	it	Q	uantity	Arrival Date	Note	
1	L.L & P.L & C).M.C %	6	m3	3	5000		28-11-2022		
2	Proctor			m3	3	50	000	29-11-2022		
3	Classification	n		m3	3	50	000	28-11-2022		
4	Seive analys	is		m3	3	50	000	28-11-2022		
5	CBR			m3	1	50	000	1-12-2022		
Comn	nents by:					Comm	ents by:			
to [[El Mahjoub CE	NTER L	n fill material by <mark>KK Lab)</mark> lab and the re tions and accepted	esults		Test R (5000		or Estimated Qua	ntaties	Of about
		2.2		APPRO	OVAL	STATUS				1. 5
Organisation Name					Sign				A-AWC-R	

	APPI	ROVAL STATUS		1. 5 1
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG : Mahmoud Elkhlawy	mohamed Khairy	1/12/2022	A
QA/QC*	omar youssel	omar yousset	1/12/2022	A
GARB**	HUSSEIN FOUAD	Harren	1/12/2022	A
Employers Representative	as Ahmed Mo	Khtor	1-12-2022	A

^{*} Designer

^{**} Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST









Location Name	Co	entractor Company					Design	ner Compa	inv	
Electric express train	EL ZH	Υ		k.k						
Issued by	Name	Sign Date				Time				
Contractor	Eng/ MAHMOUD ELKHLAWY	mohamed Khairy 1-12-2022								
Contractor Reference	ZI	H-10								
Received by ER	Je Ahad A	NOIS NOW MAR	C1	C2	СЗ	DD	M	YY	нн	M M
TREEFFER BY ER	carriyaled 1	WAR MAR	KP	EW	CS	1	12	207	2	741

Description	on of Materials	Mid	Middel- Embankment Soil (A-1-a)				
Location Of Stock			536+300				
Item	Specification	Test requireme	ent	Test result attach	nment Remarks		
1	ASTM D 75	Aggregate Sampling		According to specifi			
2	ASTM C 136	Sieve Analysis		According to specifi			
3	ASTM D 1440	Passing Sieve, No 200		7.6 %			
4	ASTM D 4318	Atterberg limit		Non. P			
5	ASTM D 2974	Moisture o		6.50 %			
6	ASTM D 1557	Modified	proctor	2.15			
7	ASTM D 1883	CBR	No. of the second	42.00 % -			
Comment	s by:			Comments by:			
AP	proved	US.	Per	attach	ed.		

	А	PPROVAL STATUS		
Organisation	Name	Sign	Date	A-AW¢-R
Contractor	ENG : MAHMOUD ELKHLAWY	mohamed Khairy	1-12-2022	13 1
QA/QC *	omar youssef	omar youssel	1-12-2022	A
GARB**	HUSSEIN FOUAD	Hayren	1-12-2022	/ h 1
Employers Representative	de Ahmed M	Khtar	1-12-2012	

^{**} Alignment/Bridges: Culvert only



Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARSA MATROUH

From Station 504+000 To Station 568+177



PARTICLE SIZE DISTRIBUTION OF SOIL



TESTING DATE:	28\11\2022	code			
LOCATION	K.P (536+300)		ZONE	536+000 _ 537+000	
AME COMPANY	ALZOHOUR	ZH-10		350.000_337.000	

2-Gradient test

A-gradation of bulk mat	<u>erials</u>			SAMPLE V	VEIGHT [g]	2099	4.00	gm		table classify
sieve size	2	1.5	1	4/3	2/1	8/3	#4	PASS		soil classify
Mass retained (g)	1158.0	2338.0	1635.0	2279.0	2119.0	2956.0	2955.0		Ĭ	A-1-a
Cumulative Retained (g)	1158.0	3496.0	5131.0	7410.0	9529.0	12485.0	15440.0		PRO	2.15
Cumulative Retained %	5.5	16.7	24.4	35.3	45.4	59.5	73.5		wc	6.50
Cumulative Passing %	94.5	83.3	75.6	64.7	54.6	40.5	26.5		CBR	42.00

3-soft material gradation	2			WT.OF sample	500.00	gm
sieve size	10	40	200			
Cumulative Retained (g)	51.00	168.00	357.00			
Cumulative Retained %	10.20	33.60	71.40			
Cumulative Passing %	89.80	66.40	28.60			

2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
94.5	83.3	75.6	64.7	54.6	40.5	26.5	23.8	17.6	7.6
	12787474	50.0 37.5	50.0 37.5 25.0	50.0 37.5 25.0 19.0	50.0 37.5 25.0 19.0 12.5	50.0 37.5 25.0 19.0 12.5 9.5	50.0 37.5 25.0 19.0 12.5 9.5 4.75	50.0 37.5 25.0 19.0 12.5 9.5 4.75 2.00	50.0 37.5 25.0 19.0 12.5 9.5 4.75 2.00 0.425

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

Contractor

Consultant

omar your

غرة المحدود الفنازات الفريد والمرابع المرابع المرابع المرابع المرابع والماث التربة القطار السريع – فحوكم – مطروح الم





Weight of empty mold:

Mold Volume:



Electric Express Train - HSR

From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH

From Station 504+000 To Station 568+177



PROCTOR TEST



2.15

TESTING DATE:	29/11/2022	code		
LOCATION	K.P (536+300)	711.40	Station	536+000 _ 537+000
NAME COMPANY	ALZOHOUR	ZH-10		

MAX Dry Density

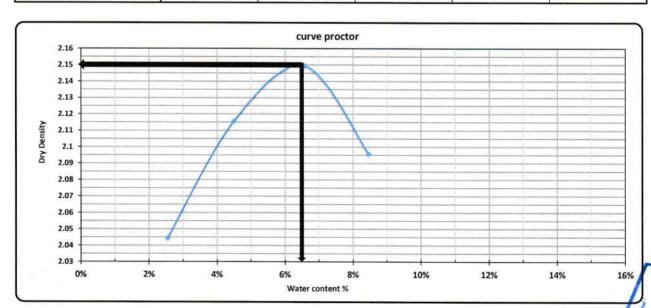
Water content %

6088.0

2123.0

trial no :	1	2	3	4	5
Wt. Of Mold+ wet soil	10539.0	10674.0	10841.0	10782	
WT. WET SOIL	4451.0	4586.0	4753.0	4694.0	

Tare No.	2	2	5	6	20	12	7	6	
Tare wt.	34.67	31.23	31.45	32.65	25.67	28.45	33.12	29.52	
Wt. Of wet soil & tare	165.0	195.0	166.0	200.0	166.0	172.0	194.0	171.0	
Wt. Of dry soil & tare	161.6	191.2	160.7	193.0	157.0	163.5	181.9	159.5	
Wt. Of water	3.4	3.8	5.3	7.0	9.0	8.5	12.1	11.5	
Wt. Of dry soil	126.9	159.9	129.2	160.4	131.3	135.0	148.8	130.0	
Water content %	2.7%	2.4%	4.1%	4.4%	6.8%	6.3%	8.1%	8.8%	
AV.Water content %	2.5	5%	4.5	5%	6.0	5%	8.:	5%	
Dry Density	2.0)44	21	116	2.1	150	21	096	



Contractor

الرقة الملازة الفازلة الفازية والغربية والغربية والمربية ومعمل اختبارات وإبدات التربة المحجود المحجود المحجود المحجود

Consultant

omar yousself









California Bearing Ratio TEST



Testing Date :	1-12-2022	Code		
Location :	K.P (536+300)		Station	F2(1000 F3F1000
NAME:	ALZOHOUR	ZH-10	Station	536+000 _ 537+000

-: Test Results

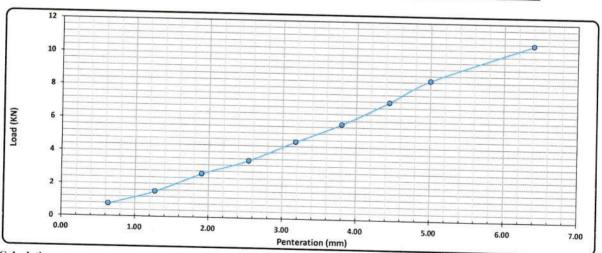
Compaction % for Mold		
Mold No.	55	
Mold Vol. (cm ³)	2151	
Mold WT. (gm)	15700	
Mold WT. + Wet WT. (gm)	20518	
Wet WT. (gm)	4818	
Wet Density (g/cm^3)	2.240	
Dry Density (g/cm^3)	2.101	
Proctor Density (g/cm^3)	2.150	
Compaction %	98	

Tare No.	5
Tare WT. (gm)	31
Tare WT. +Wet WT. (gm)	233
Tare WT. +Dry WT. (gm)	220,49
Water WT. (gm)	12.5
Dry WT. (gm)	189.5
Moisture Content %	6.6

Swelling				
Mold No.	55			
Date	01-12-22			
Intial Height (mm)	2.00			
Final Height (mm)	2.10			
Difference	0.100			
Sample Height (mm)	120.00			
Swelling Ratio %	0.08%			

Loading Reading:

0.00	ESPAIN CHAIN	RECIDENTS		100000000	525-6-525-6	4.45	5.00	6.40
8,00	156.00	270.00	356.00	478.00	590.00	730.00	867.00	1093.00
0.8	1.5	26	2.5		100000000000000000000000000000000000000		807.00	1093.00
	0.8		210.00	0.8 1.5 2.5	0.8 1.5 2.00 350.00 478.00	0.8 1.5 2.00 350.00 478.00 390.00	0.8 1.5 2.6 2.6 2.6	0.8 1.5 2.6 2.6 2.7 478,00 390,00 730,00 867.00



Calculations: -

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	000
(mm)	(Kn)	1221		mora - compaction	Compaction	CBR
,,	(Kii)	(Ib)	(%)	(%)	(%)	At Preent 98%
2.50 +	3.49	13.4	26.1%		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
5.00	9.50		20.1 78	99	98	25.9%
STATE	8.50	20.0	42.4%	1 22	70	42.007

Lab. Specialist

Lab. Engineer

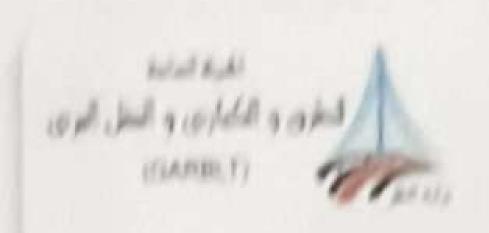
Consultant Engin

Name:











Contractor		EL ZHOOR		Desig	gner Co	ompa	ny			. K	
	Name	Sign			Date	0			Ti	me	
Issued by Contractor	Eng : Mahmo El kahlawy		Lo		23-2-2	023					
Received by ER	de Ahme	Makhtar	STR	KP	Ew.	CS	23	MM Z	79	NH Z3	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2		Work Activity	
CODE - 3		Sub Element of Activity	
			7110 7-14-01-2

EHR-3-+7-11-0 NB: Package 1 Only (Package 2 via Aconex) THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW Plate load test for (Middle embankment) **Description of Test Materials** 536 + 200- 1.5 536 + 080**Location of Test** Remarks Test result attachment Test Requirement Specification Location Item Approved Ev₂ ≥ 40 MPa 207.70 MPa DIN 18134 Ev_2 536 + 150

Comments by:	Comments by:
* APProved	Per attached.

		APPROVAL STATUS		
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Eng Mahmoud El kahlawy	M. E.L.	23-2 2023	A
QC/QA		1-	23-2-2023	شاری البی سی
GARB *	Eng. Hussein Fouad	1 Charles	23-2-2023	A
Employers Representative	de Ahmed	Mokhton	23-2-2023	A

^{*} Alignment / Bridges: Culvert Only







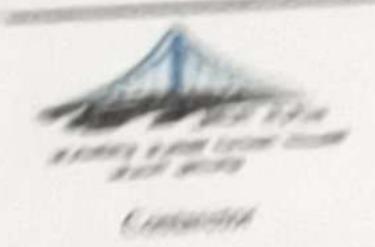
The Work described below		m Notice Period net le	ss than 24							
Company		OOR COMPANY		er Co	mpany'		KK	CONS	ULT.	
Issued by Contractor	Name Eng: Mahmoud Elkhilir	Ny Supplied to the same of the	Date 22	2-2-	2023		Tim	1:2	4	
Received by Employers Representative	M.A	37 30 8 8 W	R K.PB36	EW	CS.	DD 22	MM 2	2023	HH	2 MM
CODE - 2	Station Referen	Ge De	Di to 83 pot Reference Work Activi		F	or Kilo		Kp XXX		Km is used
CODE - 3		Su	b Element of A	Activity						
		EXPLANATION OF WO	RK TO BE IN	ISPEC	TED					
Desc	ription	Elem	ent					Item		
Earth	Works	Fill	15)			ram S	t (536	+080)1	0 (530	+200)
	INSPECTIO	ON DETAILS The Following	will be ready at t	he Plann	ned Inspec	ction Ti	me			
	lanned Inspection	Date		١	Planne	d Ins		on Tim	ie	
	22-2-	2023		-	13:2	24				
	C	OMPLIANCE EVIDENCE	Must be Include	d as app	propriate					
Checklist Attached	1 D	est Results Attached	Calibratio	n Atta	nched] (Other	as indic	cated[
Drawing Re	ference	ITP Referenc	e				MS R	teferen	ce	
			12							
Ci	ivil	Surv	exp	+			N	later	ial	
Ha	ludy	Abdel Ctah - 3	The same of the sa	10	SI.S		H	alid	3	
Visual we	pection is			12	Sau	A	Cone	Ae	equite	d
acc	cepted	Levels are	20 Pm	ned	0	ade	load			

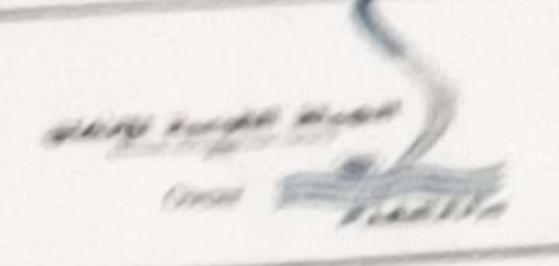
INSPECTION RESULT	NSPECTION RESULT								
Organisation	Name	Sign	Date	Time	A-AWC-R				
Contractor	Mahmoud Elkhihwy	12							
QA/QC*		,		بنند	Trans.				
GARB**		2/0		د قندیل	1				
Employers Representative Notes			(8)						
Employers Representative Sign	M-A	28202	023		A				

^{**} Alignment: Bridges: Culvert









Contractor Consultant

-1.5

Plate Load Test Results

Company Name Location Taste Date Layer level

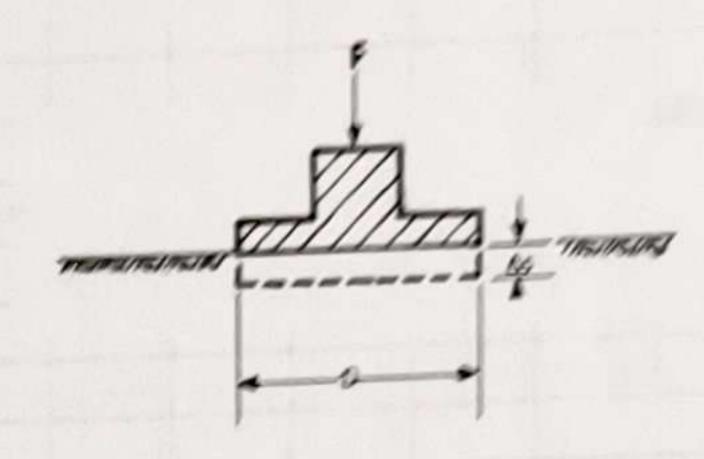
39.3 536+300 To 536+000 23-2-2023

596-150

EQUIPMENT AND TEST PROCEDURE:

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a

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



1 = 1000

14 = suttenment

D = disservation of this place

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.80 m and D = 0.792 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.52 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter =

meter =	300mm	1		646					S.m. 2	haz
Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett.3	Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	ww	West
0.000	0.0	0.000	0.00	13.23	17.67		0.000	0.000		0.000
1.000	2.4	0.707	0.01	13.17	17.58		0.060	0.090		0.07:
2.000	18.8	5.652	0.08	12.91	17.38		0.320	0.290		0.30
0.080	37.7	11.304	0.16	12.72	17.31		0.510	0.360		0.43
4.000	58.9	17.663	0.25	12.59	17.24		0.640	0.430		0.53
5.000	77.7	23.315		12.38	17.16		0.850	0.510		0.68
6.000	98.9	29.673		12.21	17.05		1.020	0.620		0.82
7.000	117.8	35.325		12.09	16.70		1.140	0.970		1.05
8.000	58.9	17.663	0.25	12.10	16.97		1.130	0.700		0.91
9.000	29.4	8.831	0.12	12.23	17.09		1.000	0.580		0.79
9,000	2.4	0.707	0.01	12.35	17.27		0.880	0.400		0.64
10.000	2.4	0.707	0.01	12.35	17.27	18 2 T	0.880	0.400		0.64
	18.8	5.652	0.08	12.28	17.21		0.950	0.460	and the same	0.70
11.000		11.304	0.16	12.21	17.12		1.020	0.550		0.78
12,000	37.7	Control Control	0.25	12.13	17.01		1.100	0.660		0.88
13.000	58.9	17.663			16.95		1.200	0.720		0.96
14.000	77.7	23.315		12.03						1.08
15.000	98.9	29.673	0.42	11.92	16.82		1.310	0.850	6.50	1.00

			48	the
0.7 c ₁	0.35	0.61437	0.19562	9.2
0.3 6;	0.15	0.41875	0.17.502	
0.762	0.35	0.58667	0.21666	0.2
0.342	0.15	0.77991	9.21555	
D (mm)	369			
Ev,	230,93			
Ev ₂	207/10			
Area (Sq.m)	0.07965			

Ev2/Ev1	0.50	

E. = 0.75 . D . 40 / 45

= deformation modulus

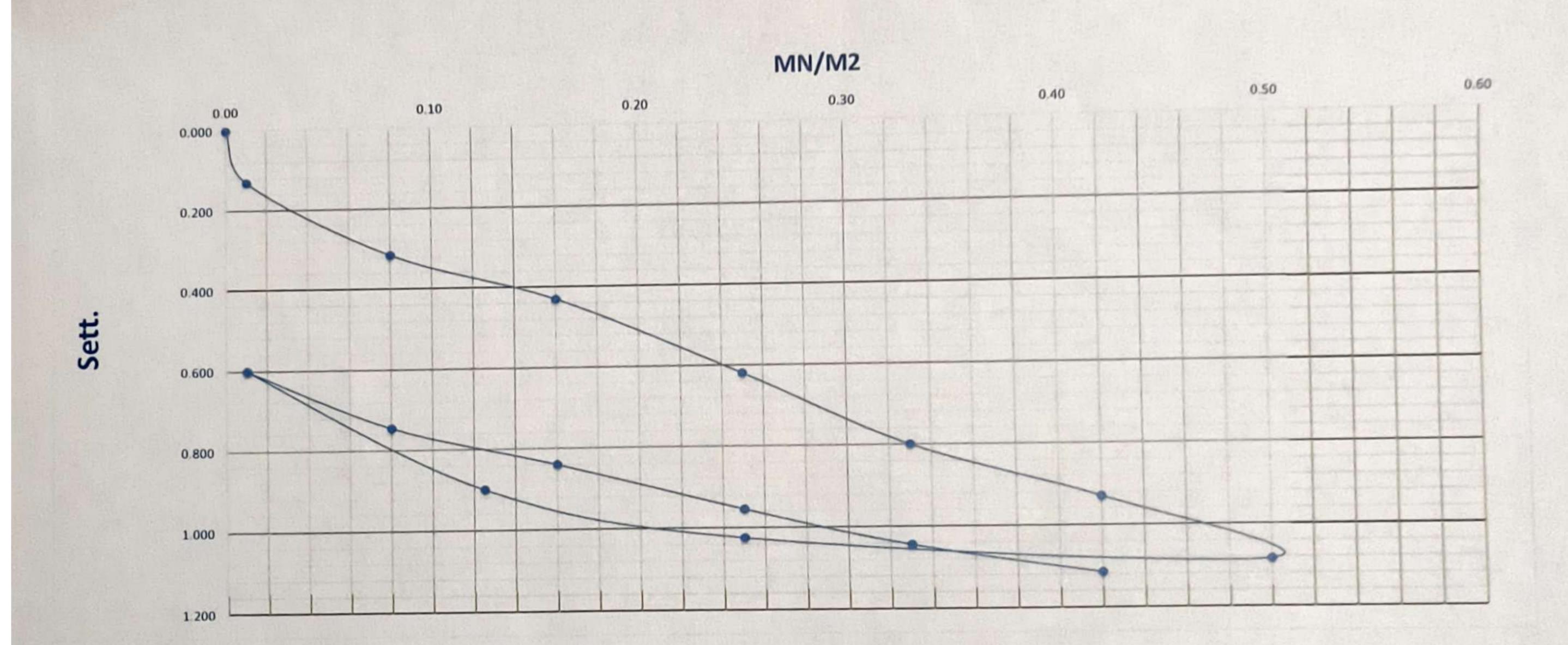
= load increment

= settlement increment

= diameter of the plate, generally 0.30 m

11-8-1

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



Lab. Specialist

Name:

Sign:

Contract Contract of the Contr

Name:
Sign:

Electric Express Train
Central Lab Number 4
Sec-1 Fuks - Matrouh

Name: Youssel Paged

Sign:

Youssel

312127

MATERIAL INSPECTION REQUEST









			2 1								
Contractor Company	El . Zhoor	Company	اللعقار	Des	signer	Comp	any				
leaved by	Name	Sign			Da	ate		Time			
Issued by Contractor	Eng \ Mahmoud Elkhlawy	mohamed K	hairy		12-1-	-2023					
Contractor Refrence	ZH-11										
Received by				C1	C2	C3	DD	MM	YY	НН	MM
ER ER	as Ahmed Mok	thton	MIR	KP	EN	C	12	1	20	23	<u> </u>

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

Descr	iption of M	aterials			ı	Fill m	naterial	resu	ılts		
Locati	ion to be U:	has	flat (- 3.	.5)		53	36+940		537+0]	
Locati	ion to be o	seu .	flat (- 1.	.5)) 536+400				536+6	80	
MAR	Approval N	0		ZH-1	1				Date		
Suppl	ier Name										
Test R	Requiremen	nt			Spe	cificat	ion		Clause		
Refer	ence Photo	s	Yes attached / No		Oth	er					
Item	Description	on	AFT DWG WEST	Unit			Quantity	Arr	ival Date	No	te
1	L.L & P.L	& O.M.C	%	m3			3200	1	.0-1-2023		
2	Proctor			m3			3200	1	0-1-2023		- ((((
3	Classifica	tion		m3			3200	9	9-1-2023		
4	Seive ana	alysis		m3			3200	9	9-1-2023		-0-40-200
5	CBR			m3			3200	1	2-1-2023		
Comn	nents by:					Com	ments by:				
to 🚺		NTER Lab	m fill material by <mark>KK</mark> of) lab and the results d accepted .		ed		Result Fo 0 m3)	or Es	timated Qua	ntatie	s Of about
			A	PPRO	VAL	STATI	JS				
Organ	nisation	Name		9	Sign				Date		A-AWC-R
Contr	actor	ENG:	Mahmoud Elkhlaw	vy n	nohe	amed	Khair		12/1/20	023	17AS
QA/Q	C *	om	ar youssel				yousse	f	12/1/20)23	3A)
GARB	**	Н	USSEIN FOUAD	1	4	wh	loen_	_	12/1/20	23	A

^{*} Designer

Employers

Representative

as Ahmed Mokhtar

12-1-623

^{**} Alignment / Bridges: Culvert Only

APPROVAL







Location Name	Co	ntractor Comp	any 🏸					Desigr	er Compar	ny	
Electric express train	EL ZH	OORCON	MPAN	Y					k.k		
A common to be a comm	Name	Sign		Date	9			Time			
Issued by Contractor	Eng/MAHMOUD ELKHLAWY	mohamed K	hairs	1	L 2-1 -2	2023					
Contractor Reference	ZI	H-11									
	100	ad by		C1	C2	СЗ	DD	M M	YY	НН	M M
Received by ER	of Ahmad M	Okhtar	MAR	KP	Ew	cs	12	1	2023		

Description	n of Materials	Mido	del- Embankn	nent Soil (A	-1-a)				
Lo	cation Of Stock		536+600						
Item	Specification	Test requireme	nt	Test result attachm	nent Remarks				
1	ASTM D 75	Aggregate Sa	ampling	According to specifica	ntions				
2	ASTM C 136	Sieve Ana	alysis	According to specifica	ations				
3	ASTM D 1440	Passing Sieve	, No 200	12.3 %					
4	ASTM D 4318	Atterberg	limit	3.10% /					
5	ASTM D 2974	Moisture c	ontent	8 %					
6	ASTM D 1557	Modified p	roctor	2.14					
7	ASTM D 1883	CBR		39.80% /					
Comments	s by:			Comments by:					
	Approve	d us	Der	attache	201				

		APPROVAL STATUS		
Organisation	Name	Sign	Date	A-AWE-R
Contractor	ENG : MAHMOUD ELKHLAWY	mohamed Khair	12-1-2023	A
QA/QC*	omar yourself	omar youssel	12-1-2023	A 3.
GARB**	HUSSEIN FOUAD	Hurren	12-1-2023	/ A /
Employers Representative	as Ahmed M	'a khter	12-1-623	A

^{*} Designer ** Alignment/Bridges: Culvert only



Electric Express Train - HSR From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA To MARSA MATROUH

From Station 504+000 To Station 568+177

الهبئة القومية الإنفاق المراقع (1888)

Opreating Lab

Al Nuby Central Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:		09/01/2023		Co	de			T			
LOCATION		K.P 536+600		711	44	zc	NE	536	+000	537+000	
NAME COMPANY		AL Zohour		ZH	-11						
1-visual inspection test								En	nbankmen	t (4240498)	
-										37.00	
2-Gradient test					***************************************					T,S	
A-gradation of bulk mate	<u>erials</u>			SAMPLE W	/EIGHT [g]	1936	68.00	gm		table classif	
sieve size	2	1.5	1	4/3	2/1	8/3	#4	PASS		soil classify	
Mass retained (g)	0.0	1970.0	1988.0	1875.0	1750.0	2101.0	2169.0			A-1-a	
Cumulative Retained (g)	0.0	1970.0	3958.0	5833.0	7583.0	9684.0	11853.0		PRO	2.14	
Cumulative Retained %	0.0	10.2	20.4	30.1	39.2	50.0	61.2		wc	8.00	
Cumulative Passing %	100.0	89.8	79.6	69.9	60.8	50.0	38.8		CBR	39.80	
B-soft material gradation	1			WT.OF	sample	500	0.00	gm			
sieve size	10	40	200								
Cumulative Retained (g)	64.70	164.60	341.70								
Cumulative Retained %	12.94	32.92	68.34								
Cumulative Passing %	87.06	67.08	31.66								
C-General gradient											
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200	
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075	
Cumulative Passing %	100.0	89.8	79.6	69.9	60.8	50.0	38.8	33.8	26.0	12,3	
							A1407-10-10				

ATTERBERG LIQUID LIMIT (L.L.) PLASTIC LIMIT (P.L.) PLASTIC INDEX (P.L.)

Contractor

Consultant

omay yous of supporting the public space of the



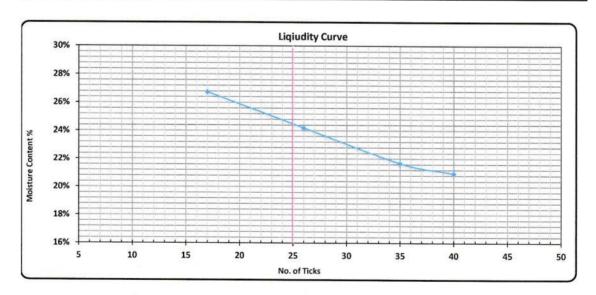


Plasticity and Liquidity Test -Atterberg Limits

Testing Date:	10/01/2023	Code			
Location:	K.P 536+600		Zone	536+000	537+000
Company Name	AL Zohour	ZH-11			120000

Testing Results :-

Test		Plastic Limit				
No. of Ticks	40	35	26	17		-
Tare No.	22	45	17	20	4	15
Tare WT. (gm)	54.30	41.40	59.80	60.4	59.40	31.50
Tare WT. + Wet WT. (gm)	72.20	56.00	79.30	89.30	61.10	32.80
Tare WT. + Dry WT. (gm)	69.10	53.40	75.50	83.20	60.8	32.6
Water WT. (gm)	3.10	2.60	3.80	6.10	0.30	0.23
Dry WT. (gm)	14.80	12.00	15,70	22.80	1.40	1.07
Moisture Content %	20.9%	21.7%	24.2%	26.8%	21.4%	21.5%
	Average %				21.	5%



L.L	P.L	P.J
24.6%	21.5%	3.1%

Lab. Specialist Lab. Engineer Consultant Engineer

Name:

Name:

Sign

معمل النوبي المركزي قطاع فوكا - مطروح

Name:





From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH

From Station 504+000 To Station 568+177



PROCTOR TEST

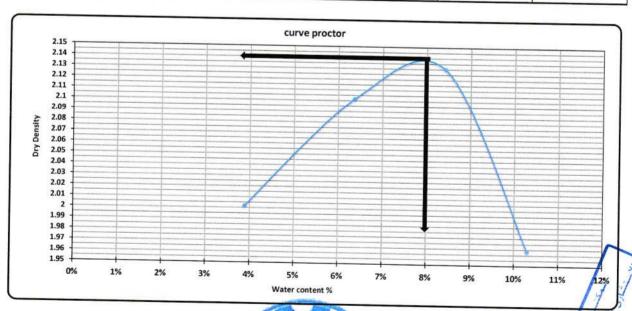
TESTING DATE:	10-1-2023	Code			
LOCATION	K.P 536+600		ZONE	536+000	507.000
NAME COMPANY	AL Zohour	ZH-11	20112	330+000	537+000

6040.0
2176.0

MAX Dry Density	2.14
Water content %	8

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10566.0	10904.0	11065.0	10752	
WT. WET SOIL	4526.0	4864.0	5025.0	4712.0	
Wt. Density	2.080	2.235	2.309	2.165	

Dry Density	2.0	002	2.1	02	2.1	30	1.9		
AV.Water content %	3,9	0%	6.4	1%	8.4	1%	10	3%	
Water content %	4.3%	3.4%	6.3%	6.5%	8.0%	8.8%	12.4%	8.2%	
Wt. Of dry soil	92.0	87.4	89.4	100.5	80,9	87.5	80.7	109.6	
Wt. Of water	4.0	3.0	5.6	6.5	6.5	7.7	10.0	9.0	
Wt. Of dry soil & tare	146.0	147.0	144.4	143.5	143.5	142.3	140.0	141.0	
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	
Tare wt.	54	59.6	55	43	62.6	54.8	59.3	31.4	
Tare No.	22	17	26	7	90	21	4	15	



Contractor

القطار النصريع معمل النبابي المركزي قطاع فوكا - مطروح Consultant

omar your





California Bearing Ratio TEST

Testing Date :	12/1/2023	Code			
Location :	K.P 536+600		Zone	536+000	537+000
Company Name	AL Zohour	ZH-11			

-: Test Results

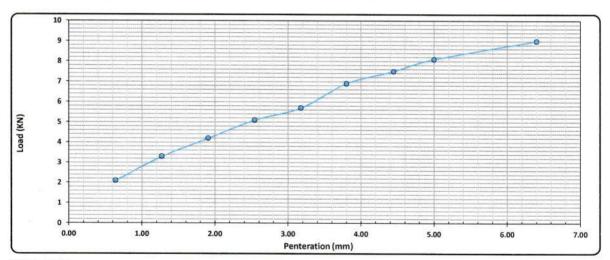
Compaction % for Mold	
Mold No.	3
Mold Vol. (cm3)	2025
Mold WT. (gm)	5034
Mold WT. + Wet WT. (gm)	9689
Wet WT. (gm)	4655
Wet Density (g/cm^3)	2.299
Dry Density (g/cm^3)	2.129
Proctor Density (g/cm^3)	2.140
Compaction %	99.5

Mositure Ratio After Compac	ted Mold
Tare No.	8
Tare WT. (gm)	47
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	142.4
Water WT. (gm)	7.6
Dry WT. (gm)	95.4
Moisture Content %	8.0

Swelling	
Mold No.	3
Date	12/01/2023
Intial Height (mm)	3,00
Final Height (mm)	3.00
Difference	0
Sample Height (mm)	120.00
Swelling Ratio %	0%

Loading Reading:

Penteration (mm)	0.64	1,27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (mm)	0.07	0.11	0.14	0.17	0.19	0.23	0.25	0.27	0.30
Load (KN)	2.1	3.3	4.2	5.1	5.7	6,9	7.5	8.1	9.0



Calculations: -

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(Ib)	(%)	(%)	(%)	At Preent 98%
2.50	5.10	13.4	38,2%			37.6%
5,00	8.10	20.0	40.4%	99	98	39,8%

Lab. Specialist

Name :

Sign:

Lab. Engineer

Same: (eO)

القطار الاسريع معمل النوبي المركزي قطاع فوكا - مطروح Consultant Engineer

Name: omar you

Sign: Omar youssel

SUBMISSION of TEST RESULTS









Contractor	EL ZHO	Desig	ner Co	mpa	ny	K. K					
Issued by	Name	Sigh	NA STATE OF		Date	9			Tir	me	
Contractor	Eng : Mahmoud El kahlawy	E	27-2-2023								
Received by ER	as Ahmed Mo	Khtar	STR	C1 KP	GW	CS	DD 77	MM Z	70	HH 23	MIM

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

ZHQ-3-+6-7L-9 NB: Package 1 Only (Package 2 via Aconex) THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW Plate load test for (Middle embankment) **Description of Test Materials** 536 + 400 - 1.5 **Location of Test** 536 + 300 Remarks Test result attachment Specification Test Requirement Location Item Approved 204.03 MPa 536 + 350Ev₂ ≥ 40 MPa EV₂ **DIN 18134**

Comments by:			Comments by:
* Approved	as	Per	at tached.

		APPROVAL STATUS		House His To Said
Organisation	Name	Sign /	Date	A-AWC-R
Contractor	Eng Mahmoud El kahlawy	Elle	27-2-2023	
QC/QA	omar yourset	omar yousself	37-2-2023	تشكرى الهند
GARB *	Eng. Hussein Fouad	Hunten	27 2 2023	A
Employers Representative	de Ahmed	Mokhtan	27-2-62	BA

^{*} Alignment / Bridges: Culvert Only

REQUEST

ZH-R-3-76







CATIONI DAInimu	m Notice Desi	ad not loss	than 24								
				er Con	npany*	KKC	CONS	ULT.			
	142	1 Day	Date		- in-	Time					
Manufacture of the contract of	Signi		The second second second	-2-	2023	10	. 4	15			
	vy	#							MN		
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M.A	262	023 UIK	K.P536	EW	CS 2	6 2		1			
S1 to S21		D	1 to S3	AP AAA NOLE							
Station Reference	e				101	raioineter p					
		Sub E	Element of A	ctivity							
	EXPLANATIO	N OF WOR	(TO BE IN	ISPEC	IED		14-				
cription		Element							· · · · · · · · · · · · · · · · · · ·		
Works		Fill (-1.5			Fro	m St (536	+300) 1	10 (536	1400 1		
				h = Di	ad Increase	on Time					
		ne Following will	be ready at t	he Plann	Planned	Inspecti	on Tin	ne			
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6/1/002	5										
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	-0	.0	Date		Tillie	N-Marc	*				
Mahmoud Elki	ilhwy	*			Call	14					
			6	M	فالق المهندسي)					
		1/2	V		المعالم المعالم	A					
otes											
	Name Eng: Mahmoud Elkhihv M·A S1 to S21 Station Reference Cription Works INSPECTICA Inspection Conductor Conductor Station Reference Conductor Conductor	EL. ZHOOR COMPONIES EL. ZHOOR COMPONIES Reng: Mahmoud Elkhlhwy Eng: Mahmoud Elkhlhwy EXPLANATION EXPLANATION EXPLANATION INSPECTION DETAILS TO BE A COMPUS ACCESS	EL . ZHOOR COMPANY EL . ZHOOR COMPANY Name Sign Eng: Mahmoud Elkhihwy Sal to \$21 Station Reference EXPLANATION OF WORK Explanation Details The Following will lanned Inspection Date COMPLIANCE EVIDENCE Model of the Property of the	Name Eng: Mahmoud Elkhilhwy M. A Si to S21 Station Reference Si to S21 Station Reference Bepot Reference Work Activit Sub Element of A EXPLANATION OF WORK TO BE IN Fill (-1.5) INSPECTION DETAILS The Following will be ready at the same of	EL . ZHOOR COMPANY Designer Cor Name Sign Date Eng: Mahmoud Elkhilhwy 26 - 2 - 26 - 2 - 26 - 2 - 26 - 2 - 26 - 2 - 2	Name Sign Date Calibration Attached Calibration Attached	EL . ZHOOR COMPANY Designer Company EL . ZHOOR COMPANY Designer Company Name Sign Date Time Eng: 26 - 2 - 2023 UIR C2 C3 DD MM MAHMOUD EIKHINWY Sub Element of Activity Sub Element of Activity EXPLANATION OF WORK TO BE INSPECTED Element Hoorks INSPECTION DETAILS The Following will be ready at the Planned Inspection Time Planned Inspection Date COMPLIANCE EVIDENCE Must be included as appropriate Test Results Attached Calibration Attached Other ITP Reference Survey No Survey N	EL. ZHOOR COMPANY Designer Company EL. ZHOOR COMPANY Designer Company Name Eng: Mahmoud Elkhilhwy M.A. 2009 UIR Leng: Mahmoud Elkhilhwy M.A. 2009 UIR Leng: Mahmoud Elkhilhwy Approval Status Approval Status Mahmoud Elkhilhwy Mahmoud Elkhilkwy Mahmoud Elkhilkwy Mahmoud Elkhilkwy Mahmoud Elkhilkwy Mahmoud Elkhilkwy Mahmoud Elkh	EL. ZHOOR COMPANY. Beginer Company EL. ZHOOR COMPANY. Designer Company KK CONSULT. Date 26 - 2 - 2023 Column Y HH APPLIANTION OF WORK TO BE INSPECTED Element INSPECTION DETAILS The Following will be ready at the Planned Inspection Time Test Results Attached COMPLIANCE EVIDENCE Must be included as appropriate Test Results Attached Collibration Attached Other as indicated MS Reference NS Reference NS Reference Not Material Levels are AMO-R Note Name Sign Date Time 26 - 2 - 2023 Collibration Attached Other as indicated Collibration Attached Other as indicated MS Reference NS Reference NS Reference NS Reference NS Reference Note No		

^{*} Designer

Representative Sign

Employers

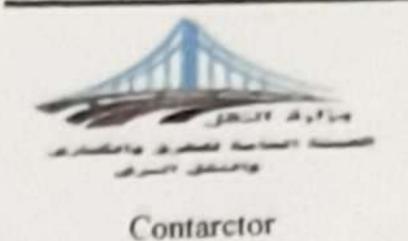
^{**} Alignment: Bridges: Culvert





Contractor Consultant





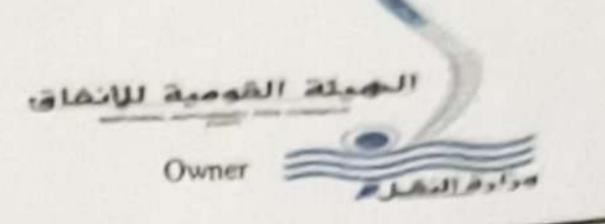


Plate Load Test Results

To

536+400

Company Name

EL-Zohor

Location

536+300_

Taste Date

27/2/2023

Layer level

-1.5

Station

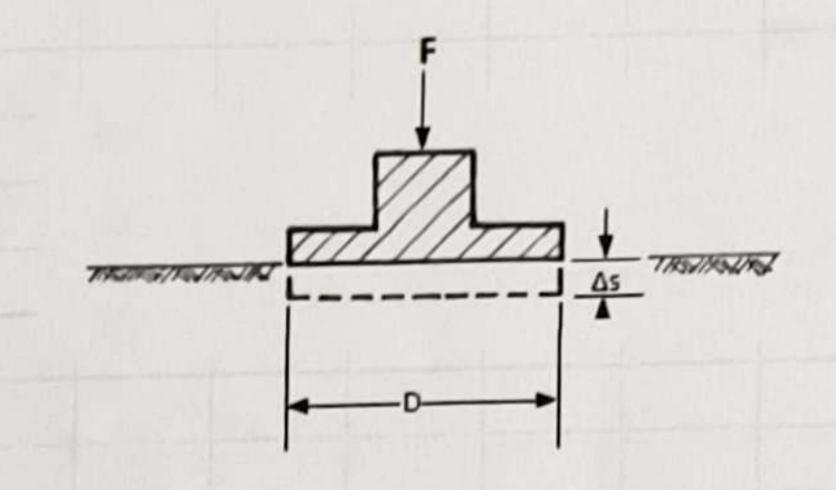
536+350

PL-9-1

EQUIPMENT AND TEST PROCEDURE: -

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

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



F = load

 $\Delta s = settlement$

D = diameter of the plate

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

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

Diameter = 300mm

meter =	Soom	Ш						P 100000		Ava
Loading	Load	Lond	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	18.39	18.04		0.000	0.000		0.000
1.000	2.1	0.707	0.01	18.22	17.95		0.170	0.090		0.130
2.000	17.1	5.652	0.08	18.01	17.88		0.380	0.160		0.270
0.080	34.2	11.304	0.16	17.81	17.79		0.580	0.250		0.415
4.000	53.4	17.663	0.25	17.47	17.69		0.920	0.350		0.635
5.000	70.5	23.315	0.33	17.28	17.59		1.110	0.450		0.780
6.000	89.7	29.673	0.42	17.04	17.48		1.350	0.560		0.955
7.000	106.8	35.325	0.50	16.83	17.36		1.560	0.680		1.120
8.000	53.4	17.663	0.25	16.93	17.40		1.460	0.640		1.050
9.000	26.7	8.831	0.12	17.13	17.45		1.260	0.590		0.925
9.000	2.1	0.707	0.01	17.43	17.59		0.960	0.450		0.705
10.000	2.1	0.707	0.01	17.43	17.59		0.960	0.450		0.705
11.000	17.1	5.652	0.08	17.36	17.56		1.030	0.480		0.755
12.000	34.2	11.304	0.16	17.23	17.51		1.160	0.530		0.845
13.000	53.4	17.663	0.25	17.10	17.46		1.290	0.580		0.935
14.000	70.5	23.315	0.33	17.00	17.41		1.390	0.630		1.010
15.000	89.7	29.673	0.42	16.90	17.37	The same of	1.490	0.670	STEELS.	1.080

		S	ΔS	Δσ		
0.7 σ ₁	0.35	0.81062	0.41375	0.2		
0.3 σ ₁	0.15	0.39688	0.41373			
0.7σ2	0.35	1.02556	0.22055	0.2		
0.3σ2	0.15	0.80501	0.22033	0.2		
D (mm)	300					
Ev ₁	108.76					
Ev ₂	204/03					
Area (Sq.m)	0.07065			Contact of the		

Ev2/Ev1	1.88	

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

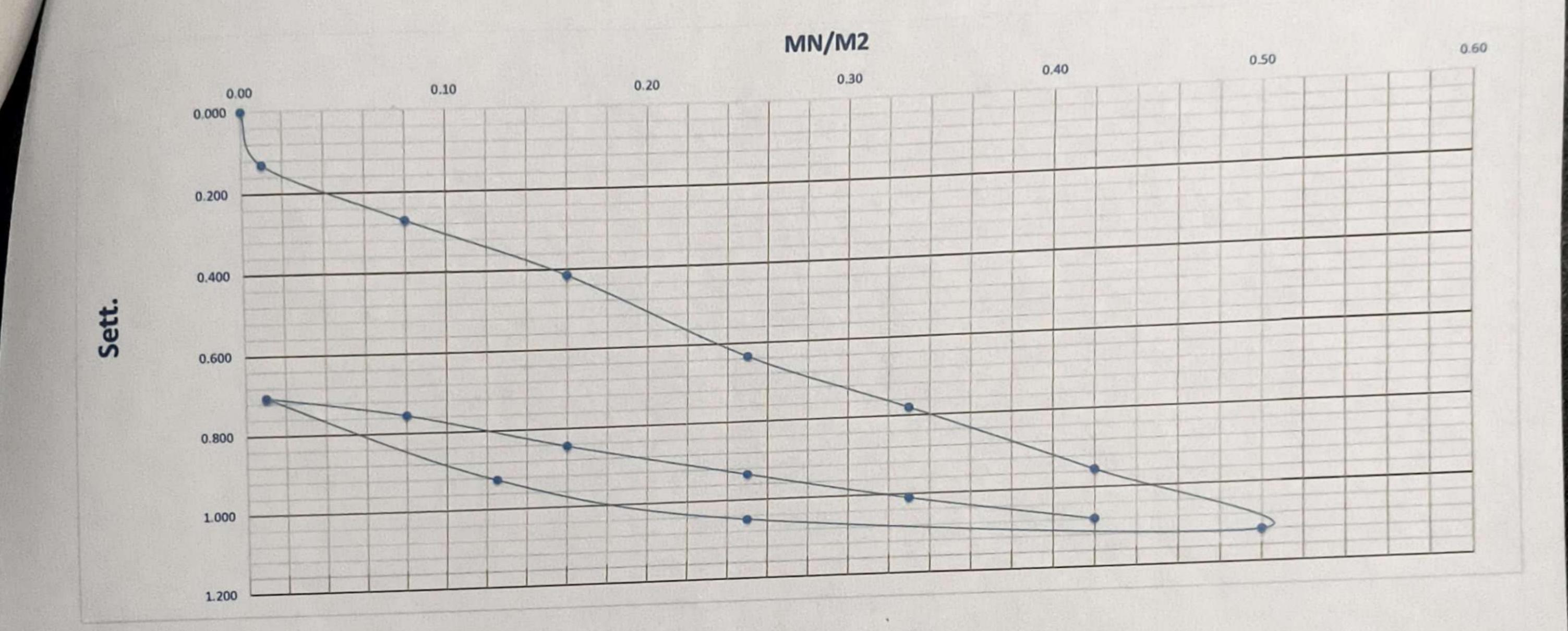
 E_v = deformation modulus

 $\Delta \sigma$ = load increment

 Δs = settlement increment

D = diameter of the plate, generally 0.30 m

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



Lab. Specialist

Name:

Sign:

Company of the same of the sam

Lab. Engineer

Name:

Sign:

معل شرك شمور على دسر العرد ر

Name: yousself regards

Consultant Engineer

MATERIAL INSPECTION REQUEST









Contractor Company	El . Zhoor Company			Designer Company							
Issued by Contractor	Eng \ Mahmoud Elkhlawy	monumed Khairy				ate 2023		Time			
Contractor Refrence	ZH-12										
Received by ER	as Ahmed Mox	htar	MIR	c1 kp	cz Ew	C3	DD 5	MM	20	HH 23	MM

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

Descr	iption of I	Materials				Fill mater	ial ı	results			
Locat	ion to be	Used	flat (- 2	2)		536+00	0		36+280		
MAR	Approval	No		ZH-1	ZH-12			Date	T		
Suppl	ier Name									34.5	
Test R	Requireme	ent	Specification			Clause	9		700		
Refer	ence Phot	os	Yes attached / No		Oth	ier					
Item	Descrip	tion		Unit		Quant	ity	Arrival Date		Note	
1	L.L & P.	L & O.M.C	%	m3		4300		2-1-2023			
2	Proctor			m3		4300		2-1-2023			raine-sacca-
3	Classific	ation		m3		4300		2-1-2023			
4	Seive ar	nalysis		m3		4300		2-1-2023			
5	CBR			m3		4300		5-1-2023			
Comn	nents by:					Comments	by:				
to 🚺	Al Nuby C	ENTER Lab	m fill material by <mark>KK</mark> of) lab and the results d accepted .		ed	Test Resul (4300 m3)		r Estimated	d Quanta	aties Of abou	ıt /
			A	PPRO	VAL	STATUS					1
Organ	isation	Name		5	Sign			Date	•	A-AW	C-R
Contr	actor	ENG:	Mahmoud Elkhlaw	y n	noh	amed Kha	iry	5/	1/2023	A	美力
QA/Q	C *	ane	w yourself		0	mar you	sef	5/1/2023		A	11
GARB	**	Н	USSEIN FOUAD	1	4	wyren		_ 5/	/1/2023	A	1

Ahmed Mokhtar

Representative ds

Employers

5-1-2023

^{**} Alignment / Bridges: Culvert Only

MATERIAL APPROVAL REQUEST







Location Name	Co	Contractor Company			Designer Company				any	
Electric express train	EL ZH	OOR COMPA	Y		k.k					
75 TXXX	Name	Sign	Dat	е			Time			
Issued by Contractor	Eng/ MAHMOUD ELKHLAWY	mohamed Kheiry 5-1-202		.023						
Contractor Reference	ZI	H-12								
). Al al/	11. 121 }	C1	C2	СЗ	DD	M M	YY	НН	M
Received by ER	as Ahmed 1	10 Khtar MAI	KP	Ew	cs	5	1	20	23	

Descriptio	n of Materials	Mid	ldel- Embank	ment	Soil (A-1-a)			
Location Of Stock		536+600						
Item	Specification	Test requirement		Test res	ult attachment	Remarks		
1	ASTM D 75	Aggregate Sampling		According	to specifications			
2	ASTM C 136	Sieve Analysis		According to specifications				
3	ASTM D 1440	Passing Siev	e, No 200		13.9 %			
4	ASTM D 4318	Atterber	g limit		5.79%			
5	ASTM D 2974	Moisture	content		7.50 %			
6	ASTM D 1557	Modified	proctor		2.13			
7	ASTM D 1883	СВ	R		38.20%			
Comment	s by:			Commen	ts by:			
A	pproved	as	Rer	att	acheel.	>		

		APPROVAL STATUS		3 3
Organisation	Name	Sign	Date	A-AWE-R
Contractor	ENG : MAHMOUD ELKHLAWY	mohamed Khairy	5-1-2023	PA
QA/QC *	omar youssel	omar youssef	5-1-2023	
GARB**	HUSSEIN FOUAD	Hunten	5-1-2023	/ A
Employers Representative	014 Ahmed N	Wokhtan	5-1-2023	A

^{*} Designer

^{**} Alignment/Bridges: Culvert only



From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA To MARSA MATROUH

From Station 504+000 To Station 568+177



2.13

7.50

38.20

PRO

WC

CBR

Opreating Lab

Cumulative Retained (g)

Cumulative Passing %

Al Nuby Central Lab

3120.0

64.60

0.0

85.60

PARTICLE SIZE DISTRIBUTION OF SOIL

8622.0

TESTING DATE:	(02-01-2023		Co	de				
LOCATION	К	C.P 536+600		74	12	ZO	NE	536+000	537+000
AME COMPANY AL Z		AL Zohour		ZH-12					
1-visual inspection test								Embankm	nent (//000m /2)
2-Gradient test									ACTION (S)
	terials			SAMPLE W	VEIGHT [g]	2819	4.00	gm	table classify
2-Gradient test A-gradation of bulk ma	terials 2	1.5	1	SAMPLE W	VEIGHT [g]	2819 8/3	4.00	gm PASS	table classify

11378.0

13803.0

16443.0

Cumulative Retained %	0.0	11.1	22.1	30.6	40.4	49.0	58.3	
Cumulative Passing %	100.0	88.9	77.9	69.4	59.6	51.0	41.7	
B-soft material gradation	2			WT.OF	sample	500	0.00	gm
sieve size	10	40	200					
Cumulative Retained (g)	72.00	177.00	332.70					
Cumulative Retained %	14.40	35.40	66.54					

6232.0

33.46

C-General gradient										
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	100.0	88.9	77.9	69.4	59.6	51.0	41.7	35.7	26.9	13.9 /

TTERBERG	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)	
LIMTS	22.95%	17.16%	5.79%	
Contractor	(e	PERF	Consultant	
3113	5 ja	منطناز النمريع	omer gousses	
() Y 29	9	معمل النوب المحم	All Gars	



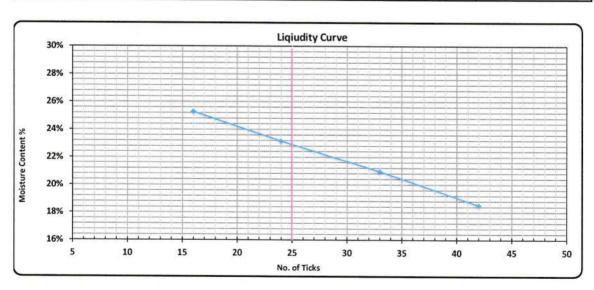


Plasticity and Liquidity Test -Atterberg Limits

Testing Date:	02-01-2023	Code			
Location:	K.P 536+600		Zone	536+000	537+000
Company Name	AL Zohour	ZH-12			D SOUTHER TOURNESS

Testing Results :-

Test		Liqiuo	l Limit		Plasti	c Limit
No. of Ticks	42	33	24	16		-
Tare No.	22	4	7	26	8	40
Tare WT. (gm)	54.30	59.30	43.00	55	46.00	46.50
Tare WT. + Wet WT. (gm)	71.60	82.40	64.80	75.80	48.10	48.50
Tare WT. + Dry WT. (gm)	68.90	78.40	60,70	71.60	47.8	48.2
Water WT. (gm)	2.70	4.00	4.10	4.20	0.30	0.30
Dry WT. (gm)	14.60	19.10	17.70	16,60	1.80	1.70
Moisture Content %	18.5%	20.9%	23.2%	25.3%	16.7%	17.6%
	Average %				17.	2%



LL	P.L	P.J
23.0%	17.2%	5.8%

Lab. Specialist Lab. Engineer Consultant Engineer

Name:

Name Sign

معمل النوبي المركزي قطاع فوكا - مطروح

Name:

omen

Sign:





From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH

From Station 504+000 To Station 568+177



PROCTOR TEST

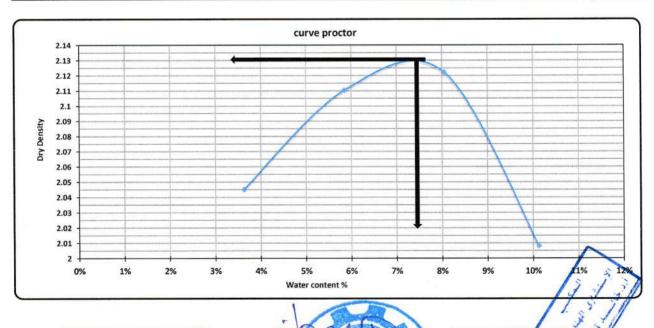
TESTING DATE:	2-1-2023				
LOCATION	K.P 536+600		ZONE	536+000	537+000
NAME COMPANY	AL Zohour	ZH-12			

Weight of empty mold:	6040.0
Mold Volume:	2176.0

MAX Dry Density	2.13	
Water content %	7.5	

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10652.0	10901.0	11030.0	10852	
WT. WET SOIL	4612.0	4861.0	4990.0	4812.0	
Wt. Density	2.119	2.234	2.293	2.211	

Tare No.	7	32	10	22	23	16	11	40	
Tare wt.	43.1	54.6	43.7	54	59.6	33.3	46.7	46.6	
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	
Wt. Of dry soil & tare	147.0	146.0	144.0	144.8	143.5	141.0	141.0	140.0	
Wt. Of water	3.0	4.0	6.0	5.2	6.5	9.0	9.0	10.0	
Wt. Of dry soil	103.9	91.4	100.3	90.8	83.9	107.7	94.3	93.4	
Water content %	2.9%	4.4%	6.0%	5.7%	7.7%	8.4%	9.5%	10.7%	
AV.Water content %	3.6%		5.9%		8.1%		10.1%		
Dry Density	2.045		2.110		2.122		2.008		



Contractor

المركسة الزمسود

انقطر انسریع معمل النوبي المرکزي قطاع فوکا - مطروح Consultant &





California Bearing Ratio TEST

Testing Date:	5-1-2023	Code			
Location : Company Name	K.P 536+600	ZH-12	Zone	536+000	537+000
	AL Zohour	Zn-12			

-: Test Results

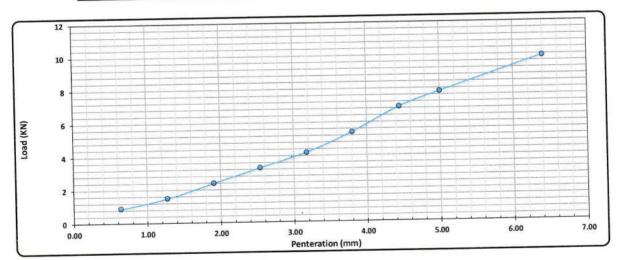
Compaction % for Mold		
Mold No.	2	
Mold Vol. (cm ³)	2168	
Mold WT. (gm)	5089	
Mold No. Mold Vol. (cm ³) Mold WT. (gm) Mold WT. + Wet WT. (gm) Wet WT. (gm) Wet Density (g/cm ³) Dry Density (g/cm ³) Proctor Density (g/cm ³)	10035	
Wet WT. (gm)	4946	
Wet Density (g/cm^3)	2,281	
Dry Density (g/cm^3)	2.127	
Proctor Density (g/cm^3)	2.130	
Compaction %	99.8	

Tare No.	8
Tare WT. (gm)	46.8
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	143
Water WT. (gm)	7,0
Dry WT. (gm)	96.2
Moisture Content %	7.3

Swelling	
Mold No.	2
Date	05-01-2023
Intial Height (mm)	1.00
Final Height (mm)	1.00
Difference	0
Sample Height (mm)	11.90
Swelling Ratio %	0%

Loading Reading:

Penteration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (mm)	0.03	0.05	0.08	0.11	0.14	0,18	0.23	0.26	0,33
Load (KN)	0.9	1.5	2.4	3.3	4.2	5.4	6.9	7.8	9,9



Calculations: -

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
	(Kn)	(Ib)	(%)	(%)	(%)	At Preent 98%
(mm)	3.30	13.4	24.7%			24.3%
2.50	7.80	20.0	39.0%	100	98	38.2%

Lab. Specialist

Name:

Sign:

معمل النولي المركزي قطاع فوكا - مطروح

MATERIAL









Contractor Company	El . Zhoor (Company				igner	Comp	any				
	Name	Sign			Da	ate		Time			
Issued by Contractor	Eng \ Mahmoud Elkhlawy	mohumed Khairj			20-1-	-2023					
Contractor Refrence	ZH-13										
Received by ER	as Ahmel Mo	Khtar	MIR	CI KP	cz Ew	C3	DD 20	MM	2	HH 22	3

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

Descri	ption of Materials			Fill	material r	esults	
		(-3))		536+900	537+0	000
		(-1.75	(-1.75)		536+000	536+1	00
Locati	Location to be Used (-1.				536+100	536+1	80
		(-1.75	5)		536+180	536+2	280
		(-1.5))		536+000	536+0	080
MAR	Approval No		ZH-1	3		Date	
Suppli	ier Name						
Test Requirement			Specification		cation	Clause	
Refere	ence Photos	Yes attached / No	ed / No Other				
Item	Description		Unit		Quantity	Arrival Date	Note
1	L.L & P.L & O.M.C	%	m3		4500	17-1-2023	
2	Proctor		m3		4500	17-1-2023	
3	Classification		m3		4500	17-1-2023	
4	Seive analysis		m3		4500	17-1-2023	
5	CBR		m3		4500	20-1-2023	
Comn	nents by:			Co	omments by:		
to 🚺		rm fill material by <mark>KK</mark> o b) lab and the results d accepted .		ad I	est Result Fo 500 m3)	or Estimated Qua	antaties Of about

	APPI	ROVAL STATUS		1 3
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG : Mahmoud Elkhlawy	mohamed Khairy	20/1/2023	1. A. S.
QA/QC *	amar joussef	anav yourself	20/1/2023	A
GARB**	HUSSEIN FOUAD	Hunran	20/1/2023	
Employers Representative	as Ahmed Mol	hter	20-1-2023	VA

Page 1 of 1 File: MIR - zh 13

^{*} Designer ** Alignment / Bridges: Culvert Only

MATERIAL





Location Name	Cor	Contractor Company				Designer Company						
Electric express train	EL ZH	OOR COMPANY			EL ZHOOR COMPANY k.k					k.k		
	Name	Sign				Time						
Issued by Contractor	Eng/ MAHMOUD ELKHLAWY	mehamed K	hairg	20-1-2023								
Contractor Reference	Zł	H-13										
		1		C1	C2	СЗ	DD	M M	YY	нн	M	
Received by ER	de Ahmed	Mokhtar	MAR	KP	En	CS	8	1	2023			

Description	n of Materials	Middel- Embar	nkment Soil (A-1-a)	
	cation Of Stock		536+600	
Item	Specification	Test requirement	Test result attachment	Remarks
1	ASTM D 75	Aggregate Sampling	According to specifications	
2	ASTM C 136	Sieve Analysis	According to specifications	
3	ASTM D 1440	Passing Sieve, No 200	14.8 %	
4	ASTM D 4318	Atterberg limit	4.73%	
5	ASTM D 2974	Moisture content	7 %	
6	ASTM D 1557	Modified proctor	2.15	
7	ASTM D 1883	CBR	38.80%	
Comment	s by:		Comments by:	
A	pproved	as per	attached.	

		APPROVAL STATUS		13 1 1
Organisation	Name	Sign	Date	A-AWC-R
Contractor	ENG : MAHMOUD ELKHLAWY	mohamed Khairy	20-1-2023	177
QA/QC*	amar youssel	omar joursel	20-1-2023	A
GARB**	HUSSEIN FOUAD	Human	20-1-2023	A
Employers Representative	as Ahmed M	o Khtew	20-1-2023	A

^{**} Alignment/Bridges: Culvert only



From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA To MARSA MATROUH

From Station 504+000 To Station 568+177



Opreating Lab

Al Nuby Central Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:		17-01-2023		Co	de					
OCATION	1115	K.P 536+600	11.11.	ZH	-13	zo	NE	536-	+000	537+000
NAME COMPANY		AL Zohour								
1-visual inspection test						Em	bankment	(REAGHES)		
2-Gradient test										
							No. 1997 - Marie III		ſſ	
A-gradation of bulk mat	<u>erials</u>			SAMPLE V	VEIGHT [g]	3140	7.00	gm		table class
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS		soil classi
0.00	2103.0	2296.0	2368.0	2785.0	2305.0	2406.0	2750.0			A-1-a
Cumulative Retained (g)	2103.0	4399.0	6767.0	9552.0	11857.0	14263.0	17013.0		PRO	2.15
Cumulative Retained %	6.7	14.0	21.5	30.4	37.8	45.4	54.2		wc	7.00
Cumulative Passing %	93.3	86.0	78.5	69.6	62.2	54.6	45.8		CBR	39.80
		1		WTOE	sample	50	0.00	gm		
B-soft material gradatio	The second second			111.01	Jumpie	ellina litaganista				
sieve size	10	40	200							
Cumulative Retained (g)	71.20	175.80	338.00							
Cumulative Retained %	14.24	35.16	67.60							
Cumulative Passing %	85.76	64.84	32.40							
C-General gradient		1								
sieve size(in)	2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
sieve size(mm)	50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
Cumulative Passing %	93.3	86.0	78.5	69.6	62.2	54.6	45.8	39.3	29.7	14.8
	2.									
1							1		/	3 .

ATTERBERG	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.	1
LIMTS	24.82%	20.09%	4.73%	

Contractor

شركسة الزهسود للمغاويات العمومية



Consultan

omar yourself



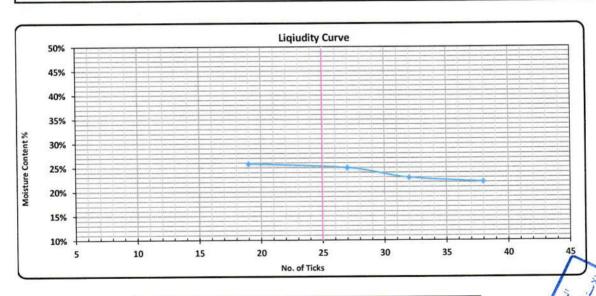


Plasticity and Liquidity Test -Atterberg Limits

Testing Date:	17-01-2023	Code		Code		
Location:	K.P 536+600	ZH-13	Zone	536+000	537+000	
Company Name	AL Zohour	211-13				

Testing Results :-

Test		Liqiud	Limit		Plastic	e Limit
No. of Ticks	38	32	27	19		
Tare No.	22	17	73	26	45	8
Tare WT. (gm)	54.10	59.60	42.90	55.1	41.60	47.10
Tare WT. + Wet WT. (gm)	70.70	74.60	59.40	69.70	43.60	50.20
Tare WT. + Dry WT. (gm)	67.70	71.80	56,10	66.70	43.3	49.7
Water WT. (gm)	3.00	2.80	3.30	3.00	0.34	0.51
Dry WT. (gm)	13.60	12.20	13.20	11.60	1.66	2,59
Moisture Content %	22.1%	23.0%	25.0%	25.9%	20.5%	19.7%
	Average %				20.	1%



LL	P.L	P.I
24.8%	20.09%	4.73%

Consultant Engineer Lab. Specialist Name:

Name: Sign:

معمل النواي المركزي قطاع فوكا · مطروح

Name:





From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA TO MARSA MATROUH

From Station 504+000 To Station 568+177



PROCTOR TEST

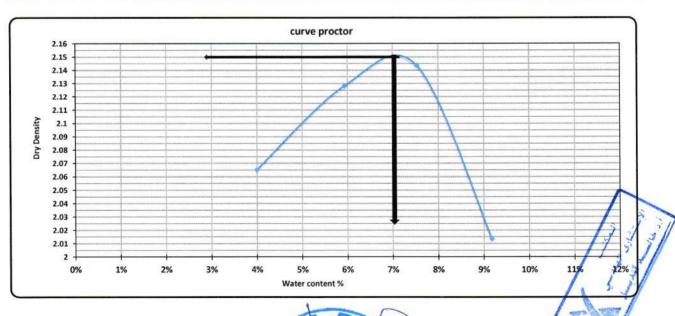
TESTING DATE:	17-1-2023	Code			
LOCATION	K.P 536+600	ZH-13	ZONE	536+000	537+000
NAME COMPANY	AL Zohour	ZH-13			

Weight of empty mold :	5764.0		
Mold Volume:	2169.0		

MAX Dry Density	2.15
Water content %	7

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10423.0	10654.0	10764,0	10532	
WT. WET SOIL	4659.0	4890.0	5000.0	4768,0	
Wt. Density	2.148	2.254	2,305	2.198	

Tare No.	35	31	40	7	4	26	17	20	
Tare wt.	73.9	70.2	46.4	42.8	59.52	55	59.5	60.9	
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	
Wt. Of dry soil & tare	147.1	146.9	144.0	144.2	143.6	143.4	142.3	142.6	
Wt. Of water	2.9	3.1	6.0	5,8	6.4	6.6	7.7	7.4	
Wt. Of dry soil	73.2	76.7	97.6	101.4	84.1	88.4	82.8	81.7	
Water content %	4.0%	4.0%	6.1%	5.7%	7.6%	7.5%	9,3%	9.1%	
AV.Water content %	4.0	0%	5.9	9%	7.5	5%	9,3	2%	110
Dry Density	2.0	065	2.	128	2.	144	2.0	013	



Contractor

شركسة الزهسور للمقاولات العمومية



Consultant







California Bearing Ratio TEST

Testing Date :	20-1-2023	Code			
Location :	K.P 536+600	ZH-13	Zone	536+000	537+000
Company Name	AL Zohour				

- : Test Results

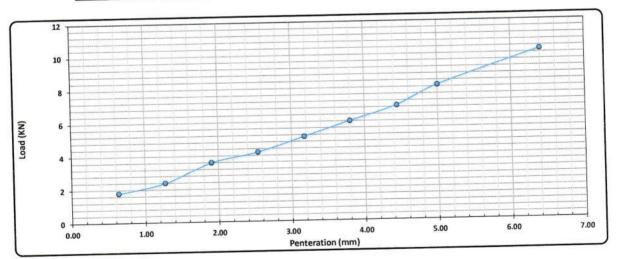
Compaction % for Mold	
Mold No.	3
Mold Vol. (cm ³)	2025
Mold WT. (gm)	5034
Mold WT. + Wet WT. (gm)	9678
Wet WT. (gm)	4644
Wet Density (g/cm ³)	2.293
Dry Density (g/cm^3)	2,143
Proctor Density (g/cm³)	2.150
Compaction %	99,7

Mositure Ratio After Compac	ted Mold
Tare No.	16
Tare WT. (gm)	33.9
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	142.4
Water WT. (gm)	7.6
Dry WT. (gm)	108.5
Moisture Content %	7.0

Swelling	
Mold No.	3
Date	20-01-2023
Intial Height (mm)	3.00
Final Height (mm)	3.10
Difference	0.100
Sample Height (mm)	120.00
Swelling Ratio %	0.08%

Loading Reading:

Penteration (mm)	0.64	1.27	1,91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (mm)	0.06	0.08	0.12	0.14	0.17	0.20	0.23	0.27	0.34
Load (KN)	1.8	2.4	3.6	4.2	5.1	6.0	6.9	8.1	10.2



Calculations: -

		Standard Load	CBR Mold - Compaction		Compaction	CBR
Penteration	Load	Standard Load				At Prcent 98%
(mm)	(Kn)	(Ib)	(%)	(%)	(%)	
2.50	4.20	13.4	13.4 31.5%			30.9%
	4.20			100	98	39.8%
= 00	8 10	20.0	40.4%	I I		-

Lab. Specialist

Name:

القطاد السريع معمل النوبي المركزي قطاع فوكا - مطروح

REQUEST









Contractor Company	El . Zhoor	Company	الله	Des	igner	Comp	any				
Issued by	Name	Sign			Date		Time				
Contractor	Eng \ Mahmoud Elkhlawy	mohamed Kho	iry		19-2	-2023					
Contractor Refrence	ZH-14										
Received by ER	25 Ahmed M	10 Khtan	MIR	c1 KP	C2 Ew	CS	19	MM 2	70	HH 2	MM 3

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

Descr	iption of I	/laterials			Fi	ill material	results		
Location to be Used			536+080 to 536+2 536+300 to 536+9	536+200 to 536+300(-1.5) 536+080 to 536+200 (-1.5) 536+300 to 536+920 (-1.5) 536+000 to 536+920 (-1.25) 536+000 to 536+080 (-1.25)					
MAR Approval No				ZH-1	4		Date		
Suppl	ier Name			T	A				
Test Requirement			Specification			Clause	Clause		
Reference Photos		Yes attached / No	,	Other			***************************************		
Item	Descrip	tion		Unit		Quantity	Arrival Date	Note	
1	L.L & P.I	& O.M.C	%	m3		4900	17-2-2023		
2	Proctor			m3		4900	17-2-2023		
3	Classific	ation		m3		4900	16-2-2023		
4	Seive ar	alysis		m3	13 4900		16-2-2023		
5	CBR			m3		4900	19-2-2023		
Comn	nents by:					Comments by:			
to 🚺	Al Nuby C	ENTER Lab	m fill material by <mark>KK</mark> o) lab and the results d accepted .		n I	Test Result Fo (49 00 m3)	or Estimated Qua	antaties Of about	
			,	APPROV	ALS	TATUS			
Organ	nisation	Name		S	ign		Date	A-AWC-	
Contr	actor	ENG:	Mahmoud Elkhlav	wy 🔽	wha	med Khair	19/2/2	023 A	
QA/Q	(C *	ona	youssel		ome	ar youssef	19/2/20	المكتب (Aارى الهند 23	
GARB	**	Н	USSEIN FOUAD		H	anten	19/2/20	A	

Employers

File: MIR - zh 14 Page 1 of 1

19-2-623

Representative 25 ** Alignment / Bridges: Culvert Only

APPROVAL REQUEST







Location Name	Co	ntractor Company	2		MA	T	C-1.1.00	Design	er Comp	nany	
Electric express train	EL Z			IY			k.k				
Issued by	Name	Sign		Date		Time					
Contractor	ELKHLAWY mohamed Khair		2023		Time						
Contractor Reference		H-14									
Received by ER				C1	C2	C3	DD	M	YY	НН	M
		l IV	AR								

Locat	ion Of Stock				dise
				536+600	
Item	Specification	Test requirement		Test result attachment	Remarks
1	ASTM D 75	Aggregate S	Sampling	According to specifications	Remarks
2	ASTM C 136	Sieve An		According to specifications	
3	ASTM D 1440	Passing Sieve, No 200		14.2 %	
4	ASTM D 4318	Atterberg limit		4.20 %	
5	ASTM D 2974	Moisture o		6.30 %	
6	ASTM D 1557	Modified p		2.16	
7	ASTM D 1883	CBR		42.90 %	
Comments by				Comments by:	

		APPROVAL STATUS		
Organisation	Name	Sign	Date	A-AWC-F
Contractor	ENG: MAHMOUD ELKHLAWY	mohamed Khairy	19-2-2023	AAVC-P
QA/QC*	omar joussef	omar jousel	19-2-2023	المكسب لاستهارى الهند
GARB**	HUSSEIN FOUAD	Hunten	19-2-2023	A
Employers Representative				

^{*} Designer ** Alignment/Bridges: Culvert only



From El Ain El Sokhna City To El Alamein - MATROUH Section - 7 From FOKA To MARSA MATROUH

From Station 504+000 To Station 568+177

الهيئة القومية الإنفاق والمحادث المحادث المحاد

Opreating Lab

Al Nuby Central Lab

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	16-02-2023	Code				
LOCATION	K.P 536+600	A CHARLEST WAY IN THE	ZONE	536+000	537+000	
NAME COMPANY	AL Zohour	ZH-14		333333	007 - 000	
1-visual inspection test				Embankment	(5000 /b8)	

-gradation of bulk materials				SAMPLE WEIGHT [g]		2571	1.00	gm		table classify
sieve size 2		1.5	1	4/3	2/1	8/3	# 4	PASS		soil classify
0.00	1998.0	2136.0	2205.0	2621.0	2003.0	2306.0	1854.0		Ĭ	A-1-a /
Cumulative Retained (g)	1998.0	4134.0	6339.0	8960.0	10963.0	13269.0	15123.0		PRO	2.16
Cumulative Retained %	7.8	16.1	24.7	34.8	42.6	51.6	58.8		wc	6.30
Cumulative Passing %	92.2	83.9	75.3	65.2	57.4	48.4	41.2		CBR	42.90

B-soft <mark>material gradatio</mark> i	2			WT.OF sample	500.00	gm
sieve size	10	40	200			
Cumulative Retained (g)	52.00	158.00	328.00			
Cumulative Retained %	10.40	31.60	65.60			
Cumulative Passing %	89.60	68.40	34.40			

2	1.5	1	3/4	1/2	3/8	# 4	# 10	# 40	# 200
50.0	37.5	25.0	19.0	12.5	9.5	4.75	2.00	0.425	0.075
92.2	83.9	75.3	65.2	57.4	48.4	41.2	36.9	28.2	14.2
	50.0	50.0 37.5	50.0 37.5 25.0	50.0 37.5 25.0 19.0	50.0 37.5 25.0 19.0 12.5	50.0 37.5 25.0 19.0 12.5 9.5	50.0 37.5 25.0 19.0 12.5 9.5 4.75	50.0 37.5 25.0 19.0 12.5 9.5 4.75 2.00	50.0 37.5 25.0 19.0 12.5 9.5 4.75 2.00 0.425

ATTERBERG	LIQUID LIMIT (L.L.)	PLASTIC LIMIT (P.L.)	PLASTIC INDEX (P.I.)	
LIMTS	24.84%	20.64%	4.20%	

Contractor

المعاولات العمومية

الشطار السريع معمل النوبي المركزي قطاع فوكا - مطروح Grant youssefs, in you



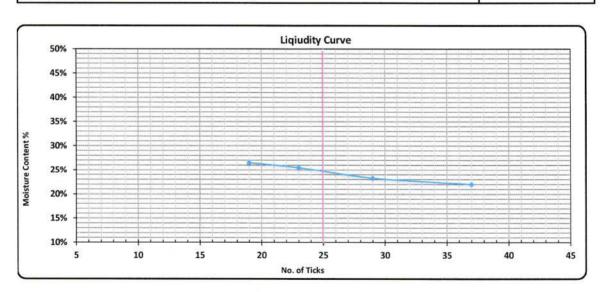


Plasticity and Liquidity Test -Atterberg Limits

Testing Date:	17-02-2023	17-02-2023 Code			
Location:	K.P 536+600	70.44	Zone	536+000	537+000
Company Name	AL Zohour	ZH-14			

Testing Results :-

Test		Liqiud	l Limit		Plastic Limit		
No. of Ticks	37	29	23	19			
Tare No.	20	8	17	21	17	10	
Tare WT. (gm)	60.90	46.80	59.50	55.2	59.50	43.70	
Tare WT. + Wet WT. (gm)	83.60	68.50	78.20	78.60	63.60	47.20	
Tare WT. + Dry WT. (gm)	79.50	64.40	74.40	73.70	62.9	46.6	
Water WT. (gm)	4.10	4.10	3.80	4.90	0.70	0.60	
Dry WT. (gm)	18.60	17.60	14.90	18.50	3.40	2.90	
Moisture Content %	22.0%	23.3%	25.5%	26.5%	20.6%	20.7%	
	Average %				20.	6%	



LL	P.L	P.I	
24.84%	20,64%	4.20%	

 Lab. Specialist
 Lab. Engineer
 Consultant Engineer

 Name:
 Name:
 Name:
 Owner yousself

 Sign:
 Sign:
 Sign:
 Sign:
 Sign:





From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA TO MARSA MATROUH

From Station 504+000 To Station 568+177



PROCTOR TEST

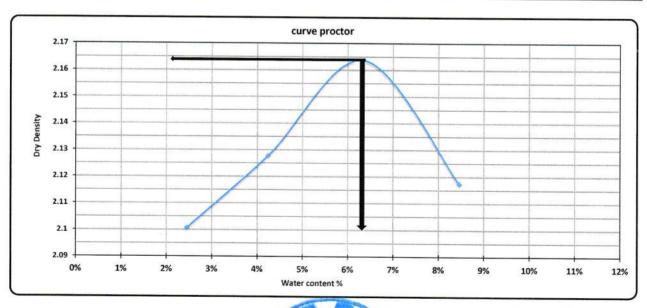
TESTING DATE:	17-2-2023	Code				
LOCATION	K.P 536+600	ZH-14	701.00	ZONE	536+000	537+000
NAME COMPANY	AL Zohour		100000000000000000000000000000000000000			

Weight of empty mold:	5764.0
Mold Volume:	2169.0

MAX Dry Density	2.16
Water content %	6.3

trial no :	1	2	3	4	
Wt. Of Mold+ wet soil	10432.0	10575.0	10755,0	10745	
WT. WET SOIL	4668.0	4811.0	4991.0	4981.0	
Wt. Density	2.152	2.218	2.301	2.296	

Tare No.	16	15	11	32	7	19	45	25	
Tare wt.	33.9	31.9	46.1	74.4	42.8	44.4	41.5	75.8	
Wt. Of wet soil & tare	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	
Wt. Of dry soil & tare	147.2	147.2	145.8	146.9	143.7	143.6	141.7	144.1	
Wt. Of water	2.8	2.8	4.2	3,1	6.3	6.4	8.3	5.9	
Wt. Of dry soil	113.3	115.3	99.7	72.5	100.9	99.2	100.2	68.3	
Water content %	2.5%	2.4%	4.2%	4.3%	6.2%	6.5%	8.3%	8.6%	
AV.Water content %	2.4	1%	4.2	2%	6,3	3%	8.5	5%	
Dry Density	2.1	01	2.1	128	2.1	164	2.1	117	



Contractor

المعاولات العوبية

النقطة المسريع معمل النواي المركزي قطاع فوي مطروح

Consultant

المحتب إعرازه المحتب ا







California Bearing Ratio TEST

Testing Date :	19/2/2023	Code			
Location :	K.P 536+600	ZH-14	Zone	536+000	537+000
Company Name	AL Zohour				

-: Test Results

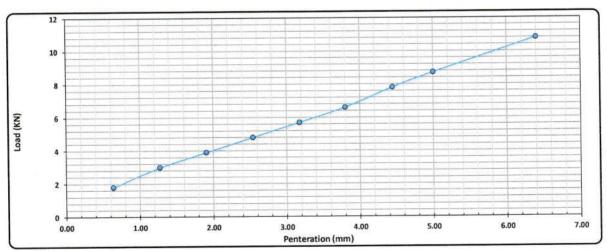
Compaction % for Mold	
Mold No.	6
Mold Vol. (cm ³)	2122
Mold WT. (gm)	6075
Mold WT. + Wet WT. (gm)	10906
Wet WT. (gm)	4831
Wet Density (g/cm^3)	2.277
Dry Density (g/cm^3)	2,142
Proctor Density (g/cm^3)	2.160
Compaction %	99.2

Mositure Ratio After Compac	ted Mold
Tare No.	26
Tare WT. (gm)	55
Tare WT. +Wet WT. (gm)	150
Tare WT. +Dry WT. (gm)	144.4
Water WT. (gm)	5.6
Dry WT. (gm)	89.4
Moisture Content %	6.3

Swelling	
Mold No.	6
Date	19/2/2023
Intial Height (mm)	2.00
Final Height (mm)	2.10
Difference	0.100
Sample Height (mm)	120.00
Swelling Ratio %	0.08%

Loading Reading:

Penteration (mm)	0.64	1.27	1.91	2.54	3.18	3.80	4.45	5.00	6.40
Load Reading (mm)	0.06	0.10	0.13	0.16	0.19	0.22	0.26	0.29	0.36
Load (KN)	1.8	3.0	3.9	4.8	5.7	6.6	7.8	8.7	10.8



Calculations : -

Penteration	Load	Standard Load	CBR	Mold - Compaction	Compaction	CBR
(mm)	(Kn)	(Ib)	(%)	(%)	(%)	At Prcent 98%
2,50	4.80	13.4	36.0%		minime confiden	35.5%
5.00	8,70	20.0	43.4%	99	98	42.9%

Lab. Specialist

Name :

Sign:

Lab Engineer

Sign:

القطار السريع معمل النوبي المركزي قطاع فوكا · مطروح Consultant Engineer

Name :

Sign: Despr

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