



Testing date : 11/10/2023
 Company Name : / /
 Project : Electric Express Train – HSR From Sohag to Qena
 S. Description : مشون 2
 Station : ST: 558+240
 Direction : Right
 Code : EM-S-6

• Sieve Analysis:

Sieve size (IN)	Passing %
2	100.0
1.5	94.2
1	85.5
3/4	81.1
3/8	72.8
3/8	69.5
4	63.2
10	58.0
40	39.8
200	7.1

Test	Results	
Soil Classification	A-1-b	
Modified Proctor	Max Dry Density	2.195
	O.M.C	6.4 %
L.L	NP	
P.I	NP	
CBR	17 %	

Notes:

Lab (CEL)

Lab. Engineer

Signature



Consultant (K.K.)

Engineer

Signature

CEL

Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية
مشاريع محافظات الوجه القبلي

Company Name : الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+240
Type of sample : مشون 2
Delivery Date : 5/10/2023
Reporting Date : 11/10/2023
Reporting No. : EM-S-6

Dear Gentleman,

Attached here with the delivered on: 5/ 10 / 2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signature



333 Mahk El Abdal Street
Zawadek, Cairo
Tel & Fax : 27367231 - 27363093



3 ش الملك الأفندي
الزمالك - القاهرة
تليفون - فاكس : 27367231 - 27363093
www.cel-egypt.com



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مكتب معامل الاستشارات الهندسية
مشاريع ومعامل المختبرات الهندسية

Company Name : العميل
Project : Electric Express Train - HSR From Sobag To Qena
Location : St: 558+240
Type of sample : مشروع 2
Delivery Date : 5/10/2023
Reporting Date : 11/10/2023
Reporting No. : EM-S-6

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100.0
37.5	1.5	94.2
25	1	85.5
19	$\frac{3}{4}$	81.1
12.50	$\frac{1}{2}$	72.8
9.50	$\frac{3}{8}$	69.5
4.75	4	63.2
2.00	10	58.0
0.425	40	39.8

Signature


Mohamed El-Agnaf
CEO & Managing Director
CEL
K.O. : 981 - 537
K.O. : 981 - 537

210 Mena El Aghout Street
Zamalek, Cairo,
Tel. & Fax : 27367231 - 27360903



إلى مكتب العميل
إلى مكتب - القاهرة
تليفون : 27367231 - 27360903
www.cel-egypt.com

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مكتب معامل الاستشارات الهندسية
مشروعات محافظات الوجه القبلي

Company Name : الإيمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+240
Type of sample : مشون 2
Delivery Date : 5/10/2023
Reporting Date : 11/10/2023
Reporting No. : EM-S-6

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	7.1 %

Signature



3 El Malek El Afdal Street
Zamalek, Cairo
Tel & Fax : 27367231 - 27363093



3 ش الملك الأفضل
الزمالك - القاهرة
تليفون + فاكس : 27367231 - 27363093
www.cel-egypt.com



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مكتب معامل الاستشارات الهندسية
مقر ومختبر معاديات الجديدة بالقليوبية

Company Name : **إيجي**
Project : **Electric Express Train – HSR From Sohag To Qena**
Location : **St. 558+240**
Type of sample : **بحر 2**
Delivery Date : **5/10/2023**
Reporting Date : **11/10/2023**
Reporting No. : **EM-S-6**

**Results of liquid limit and plasticity index
of soils according to ASTM D-4318**

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

Signature



313 Madih El Arabi Street
Zakaria, Egypt
Tel. & Fax : 27467231 - 27461091



إيجي الهندسة والبناء
القاهرة - القاهرة
T: 27467231 - F: 27461091
www.igilab.com



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مكتب استشارات الهندسة
مختبرات ومختبرات الهندسة

Company Name : (مكتب)

Project

: Electric Express Train - HSR From Sohag To Qena

Location

: St: 558+240

Type of sample

: 2.00mm

Delivery Date

: 5/10/2023

Reporting Date

: 11/10/2023

Reporting No.

: EMI-S-6

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-b)	(A-1-b)	(A-2-b)
• Group Classification	(A-1-b)	(A-1-b)	(A-1-b)	(A-2-b)
2.00 mm (No.10)	58.0	Max 50 %	-----	-----
0.425 mm (No. 40)	39.8	Max 30 %	Max 50 %	-----
0.075 mm (No. 200)	7.1	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	NP	-----	-----	-----
Plasticity Index	NP	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature



3 El-Madina El-Ahmed Street
Zamalek, Cairo,
Tel & Fax : 27367231 - 2736000



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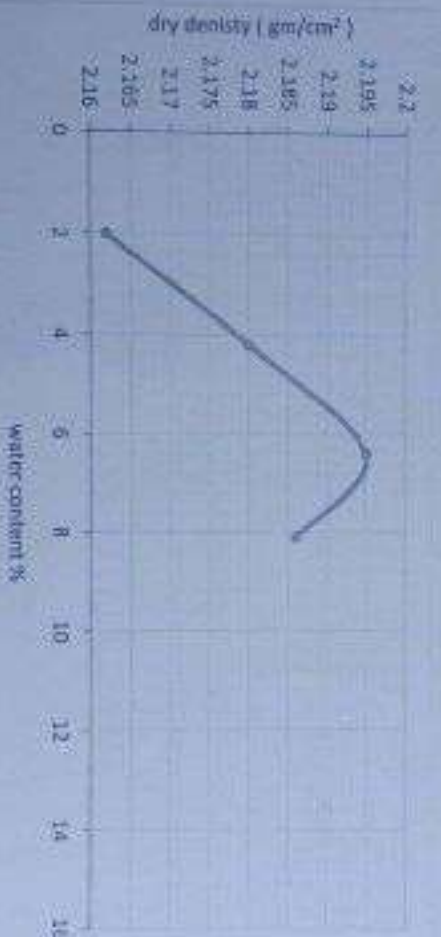
CEL

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مكتب معامل الاستشارات الهندسية
مشاريع محافظات الوجه القبلي

Company Name : الأيمن
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+240
Type of sample : مئون 2
Delivery Date : 5/10/2023
Reporting Date : 11/10/2023
Reporting No. : EM-S-6

Moisture - Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 2.195
- Optimum moisture content % : 6.4 %

Signature /


مكتب معامل الاستشارات الهندسية
مشاريع محافظات الوجه القبلي
بلاصة 558 + 240
010 - 884 - 887
010 - 884 - 887

3 El Mostak El Ahdal Street
Zamalek, Cairo
Tel & Fax : 27367231 - 27361893

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3 شارع المستأهل الأصيل
الزمالك - القاهرة
تليفون : 27367231 - 27361893
www.cel-eg.com

Company Name : (شركة)

Project : Electric Express Train - HSR From Sohag To Qena

Location : St. 558+240

Type of sample : 2 متر

Delivery Date : 5/10/2023

Reporting Date : 11/10/2023

Reporting No. : EM-S-6

Test Results of California Bearing Ratio on Base Materials

ASTM D 1883

penetration		stress on piston (Mpa)
mm	inch	
0.64	0.025	0.50
1.27	0.050	0.99
1.91	0.075	1.67
2.54	0.100	2.55
3.18	0.125	3.38
3.81	0.150	4.12
4.45	0.175	4.81
5.08	0.200	5.50
6.35	0.250	6.51

CBR Result	Stress (Mpa)		CBR 100 %
	St. Value	Sample results	
At 0.1 inch (2.54 mm) penetration	6.90	2.85	37 %

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.195 (gm/cm³)
At = 6.4 % optimum water content.
- 3- Sochange load 4.50 Kg.
- 4- CBR > 10 for minimum subgrade on bankments according project spec page No 36.

Signature

(Signature)
CEL
218-2001-007
218-2001-007

CEL

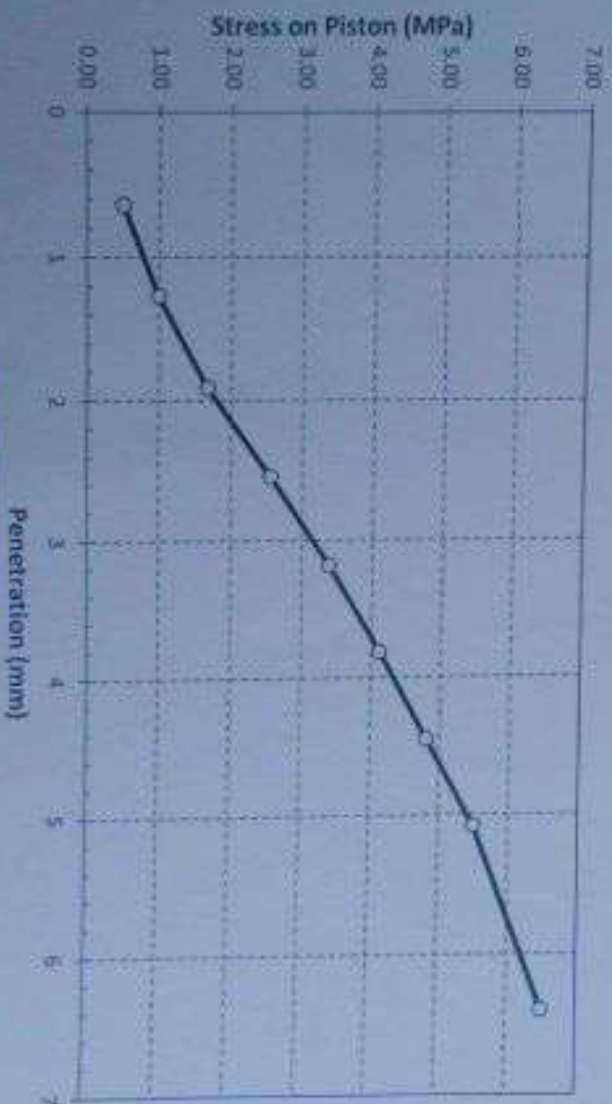
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مكتب معامل الاستشارات الهندسية
مبروعات ومخالفات الوجه القبطي

Company Name : الإيجان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+240
Type of sample : مشون 2
Delivery Date : 5/10/2023
Reporting Date : 11/10/2023
Reporting No. : EM-S-6

Load Penetration Curve of CBR Test

ASTM D-1883



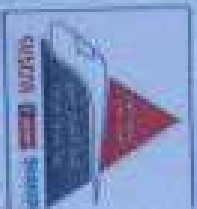
Signature:

CEL
مكتب معامل الاستشارات الهندسية
2130 081 - 837
مبروعات ومخالفات الوجه القبطي

3 El Malek El Afdal Street
Zamalek, Cairo.
Tel & Fax : 27367231 - 27363993

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Testing Laboratory

رقب (مكتب القبطي)
(المالك - القاهرة)
٧٧٣٣٠٩٤ - ٧٧٣٧٧٣١
القبطي - القاهرة
www.cel-egypt.com



Testing date : 24/8/2023

Company Name : (CEL)

Project : Electric Express Train - HSR From Sohg to Qena

S. Description : طريق 1

Station : ST : SSR+800

Direction : Right

Code : EM-8-5

• Sieve Analysis:

Sieve size (mm)	Passing %
2	98.6
1.5	96.2
1	85.5
¾	79.3
½	68.3
3/8	64.1
4	54.7
10	46.9
40	34.4
200	8

Test	Results	
Soil Classification	A-1-b	
Modified Proctor	Max Dry Density	2.269
	O.M.C	6.8 %
L.L	SP	
P.I	SP	
CBR	41.1 %	

Notes:

Lab (CEL)

Lab. Engineer
Signature

Consultant (K.K.)

Engineer
Signature



Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية
مقرات معاملات الوجه القبلي

Company Name : الأيمن
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+800
Type of sample : شون 1
Delivery Date : 17/8/2023
Reporting Date : 24/8/2023
Reporting No. : EM-S-5

Dear Gentleman,

Attached here with the delivered on 17/8/2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken.

Signature of the Engineer

CEL
Signature of the Engineer
Date: 24/8/2023
213 + 801 - 507
1460 (2023) and 1460 (2023)

3 El-Madinet El-Ahmed Street
Zamalek, Cairo.
Tel & Fax : 21367231 - 21363093



ش. المعتمد الاحمد
الزمالك - القاهرة
تليفون : 21367231 - 21363093
www.cel-egspt.com

Company Name : (البريد)
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+800
Type of sample : مثنى 1
Delivery Date : 17/8/2023
Reporting Date : 24/8/2023
Reporting No. : EM-S-5

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	98.6
37.5	1.5	96.2
25	1	85.5
19	$\frac{3}{4}$	79.3
12.50	$\frac{1}{2}$	68.3
9.50	$\frac{3}{8}$	64.1
4.75	4	54.7
2.00	10	46.9
0.425	40	34.4

CEL
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مطروحات معالقات الوجه القبلي
Signature :
248-981-831
248-981-831

341 Mada El Ahdad Street
Zamalek, Cairo
Tel & Fax : 27807231 - 2786803



مكي ابي الفاضل
مطروحات - القاهرة
27807231 - 2786803
www.cef-egypt.com



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مشاريع ومعاملات الوجه القبلي

Company Name : الإيوان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+800
Type of sample : مطون 1
Delivery Date : 17/8/2023
Reporting Date : 24/8/2023
Reporting No. : EM-S-5

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	8

Signature /



3 El Madinet El Ahdad Street
Zamalek, Cairo
Tel./Fax : 27367231 - 27360993



شركة الإيوان
الهندسة - القاهرة
تلفون - فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٠٩٩٣
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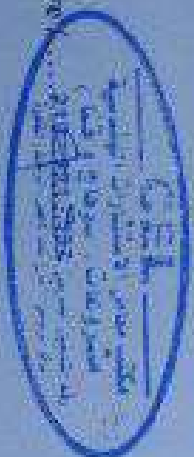
مكتب دراسات الاستشارات الهندسية
مقر ومختبرات محافظات الوجه القبلي

Company Name : **البحري**
Project : **Electric Express Train - HSR From Sahag To Qena**
Location : **St: 558+800**
Type of sample : **مشن 1**
Delivery Date : **17/8/2023**
Reporting Date : **24/8/2023**
Reporting No. : **EM-S-5**

Results of liquid limit and plasticity index of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

Signature


CEL
مكتب دراسات الاستشارات الهندسية
مقر ومختبرات محافظات الوجه القبلي

3 El-Mahdy El-Agha Street,
Zamalek, Cairo,
Tel & Fax: 23402341 - 23403003



مقر المختبر الرئيسي
الرياض - القاهرة
الهاتف - ٩٦٦١٧٦٦١ - ٩٦٦١٧٦٦٢
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Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

مقر ومكاتب محافظات الوجه القبلي

Company Name : الإيجان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+800
Type of sample : مئون 1
Delivery Date : 17/8/2023
Reporting Date : 24/8/2023
Reporting No. : EM-S-5

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	46.9	Max 50 %	-----	-----
0.425 mm (No. 40).	34.4	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	8	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	NP	-----	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %	Max 10 %

The test results are () ☒ Comply - ☐ Not Comply) with specifications limits

Signature


Mohamed Elmaghrabi
219 - 991533
1440 - 2023

310 Main St. Aftab Street
Zamalek, Cairo
Tel. & Fax : 27567231 - 27560093



ش.م.م. الإيجان
الوجه القبلي - القاهرة
219 - 991533 - 27567231 - 27560093
www.cel-eg.com



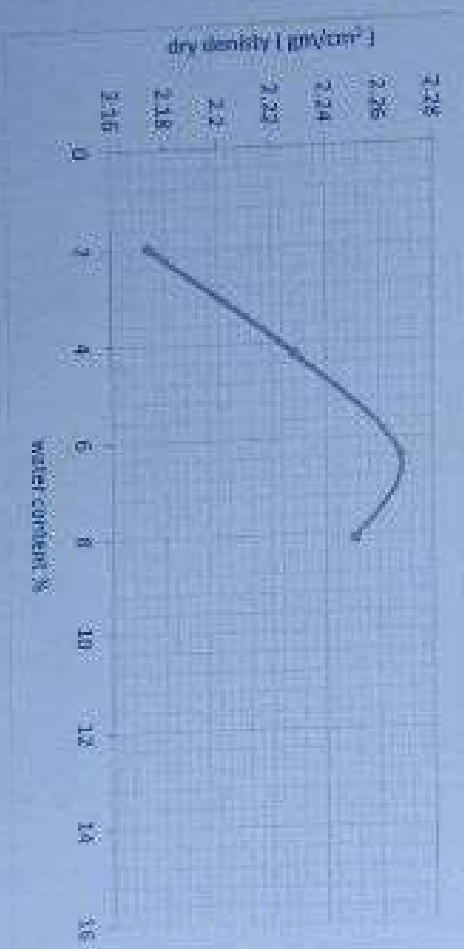
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مكتب معامل الاستشارات الهندسية
مقر ومختبرات القاهرة الجديدة

Company Name : (العميل)
Project : Electric Express Train – HSR From Sobag To Qena
Location : Sc: 558+800
Type of sample : 1 طبقا
Delivery Date : 17/8/2023
Reporting Date : 24/8/2023
Reporting No. : EM-S-5

Moisture – Density relation of soil
Test result (Modified proctor test)

ASTM D-1557



- Max dry density (gm/cc) : 2.26
- Optimum moisture content % : 6.4 %

Signature


Mohamed El-Sayed
Engineer
No. 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

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Zamalek, Cairo
Tel: 6 Fax: 27367231 - 27360003



م.ع. السيد السيد
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Company Name : (شركة)
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+800
Type of sample : 1 طبقه
Delivery Date : 17/8/2023
Reporting Date : 24/8/2023
Reporting No. : EM-S-5

Test Results of California Bearing Ratio on Base Materials

ASTM D 1883

penetration		stress on piston (Mpa)	
mm	Inch		
0.64	0.025	0.62	
1.27	0.050	1.30	
1.91	0.075	2.06	
2.54	0.100	2.97	
3.18	0.125	3.98	
3.81	0.150	4.88	
4.45	0.175	5.70	
5.08	0.200	6.42	
6.35	0.250	8.17	
CBR Result	Stress (Mpa)		CBR 100 %
Air 1 inch (2.54 mm) penetration	St. Value	Sample results	
	6.90	2.97	43.1 %

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of $\approx 2.268 \text{ (gm /cm}^3\text{)}$
At = 0.4 % optimum water content.
- 3- Surcharge load 4.50 kg.
- 4- CBR > 10 for roads and lower embankments according project spec page No 36.

Signature:

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مختبرات محامل الاختبارات الهندسية

Company Name : الزميل

Project : Electric Express Train - HSR From Sohag To Qena

Location : St: 558-800

Type of sample : طوبل 1

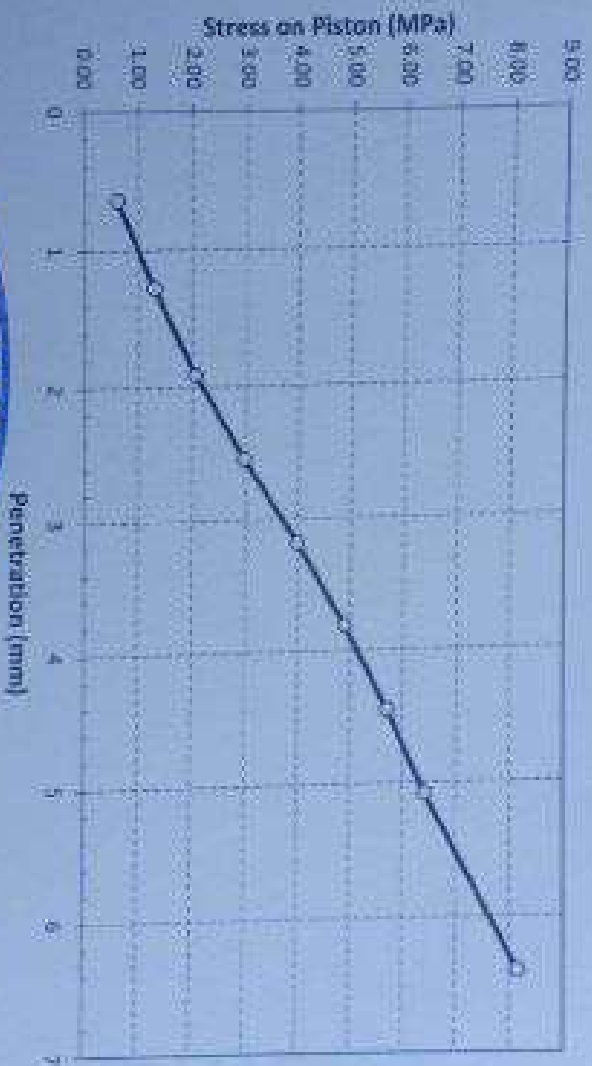
Delivery Date : 17/8/2023

Reporting Date : 24/8/2023

Reporting No. : EM-S-5

Load Penetration Curve of CBR Test

ASTM D-1883



Signature

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MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	KK
Issued by Contractor	Name	Sign	Date	Time
			22/07/2023	
Contractor Reference	EM-S-4			
Received by ER			MAR	

CODE 1	S1 to S21 Station Referencing	D1 to S1 Depot Referencing	For S22 Refer
CODE 2		Work Activity	For Kilometer point only Start Km is used
CODE 3		Sub Element of Activity	

Description of Materials	Soil (A-1-b)			
Location to be Used	558+800 (Right)			
Item	specification	Test requirement	Test result attachment	Remarks
1	ASTM C 136	Sieve Analysis	According to specifications	
2	ASTM D 1140	Passing Sieve No 200	10.5	
3	ASTM D 4318	Atterberg limit	9.9	
4	ASTM D 2974	Moisture content	6.3	
5	ASTM D 1557	Modified proctor	2.258	
6	ASTM D 1883	CBR	43	
Comments by:		Comments by:		
		تم اعتبار مدرج تربة لمحو تسليم كمينه مراكب 5000 م		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor			22-7-23	
QA/QC*			22-7-23	
GARS**				
Employers Representative				

* Designer
** Approving Bridges Society only



Testing date : 22/7/2023

Company Name : شركة الإيجاز

Project : Electric Express Train - HSR From Sobag to Qena

S. Description : طريق 1

Station : ST: 558+800

Direction : Right

Code : EM-S-4

• Sieve Analysis:

Sieve size (IN)	Passing %
2	98.5
1.5	94.0
1	85.5
¾	80.8
½	71.0
3/8	66.3
4	57.6
10	49.9
40	40.1
200	10.5

Test	Results	
Soil Classification	A-1-b	
Modified Proctor	Max Dry Density	2.258
	OMC	6.3%
L.L	NP	
P.I	NP	
CBR	4.1%	

Notes:

Lab (CPD) - CEL

Lab. Engineer/.....

Signature

Consultant (K.K.)

Engineer /.....

Signature /.....

CEL

Consulting Engineering Bureau & Laboratories

مكتب محامل الاستشارات الهندسية

مقر ومكاتب محاملات التوجه القليل

Company Name : شركة الأهرمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+800
Type of sample : مثنون 1
Delivery Date : 17/07/2023
Reporting Date : 22/07/2023
Reporting No. : EM-S-4

Dear Gentleman ,

Attached here with the delivered on 17 / 07 / 2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signature



3 El Mokda El Ahdal Street
Zamalek, Cairo
Tel & Fax : 27367231 - 27363093



شركة محامل الاستشارات
الهندسية - CEL
مقر ومكاتب محاملات التوجه القليل
27367231 - 27363093
www.ahel-cel.com

Company Name : شركة إيجي
Project : Electric Express Train - HSR From Sobag To Qena
Location : Site 558+800
Type of sample : 1 مرسون
Delivery Date : 17/07/2023
Reporting Date : 22/07/2023
Reporting No. : EM-S-4

RESULTS OF SIEVE ANALYSIS According to ASTM D-422

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	98.5
37.5	1.5	99.0
25	1	85.5
19	3/4	90.8
12.50	1/2	71.0
9.50	3/8	66.3
4.75	4	57.0
2.00	10	49.0
0.425	40	40.1

Signature : 
CEL
210 - 801 - 857
210 - 801 - 857

CEL

Consulting Engineering Bureau & Laboratories

مكتب محامل الاستشارات الهندسية

مشاريع محامل الاختبارات الوجه القبلي

Company Name : شركة الإيمن

Project : Electric Express Train – HSR From Sohag To Qena

Location : St: 558+800

Type of sample : مبون 1

Delivery Date : 17/07/2023

Reporting Date : 22/07/2023

Reporting No. : EM-S-4

Materials finer than 75 μ m (no.200) sieve

By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	10.5%

CEL

Signature :

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Tel & Fax : 27367234 - 27363093

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مشروعات محافظات الوجه القبلي

Company Name : شركة الإيمن
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+800
Type of sample : م٢ون 1
Delivery Date : 17/07/2023
Reporting Date : 22/07/2023
Reporting No. : EM-S-3

Results of liquid limit and plasticity index of soils according to ASTM D-4318

Test	Results (%)	
Liquid Limit	NP	
Plastic Limit	NP	
Plasticity Index	NP	

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مكتب معامل الاستشارات الهندسية
مشاريع محافظات الوجه القبلي

Company Name : شركة الإيجان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+800
Type of sample : مئون 1
Delivery Date : 17/07/2023
Reporting Date : 22/07/2023
Reporting No. : EM-S-3

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	49.9	Max 50 %	-----	-----
0.425 mm (No. 40).	40.1	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	10.5	Max 15 %	Max 15 %	Max 15 %
Liquid Limit				
	NP	-----	-----	-----
Plasticity Index	NP	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature

م. محمد عبد العبد
مدير مختبر
مشاريع محافظات الوجه القبلي
210 - 091 - 517
1480 - 007 - 2002025

3 El Malek El Afdal Street
Zamalek, Cairo,
Tel& Fax : 27567234 - 27567003



م. محمد عبد العبد
210 - 091 - 517
1480 - 007 - 2002025
www.eg-spl.com

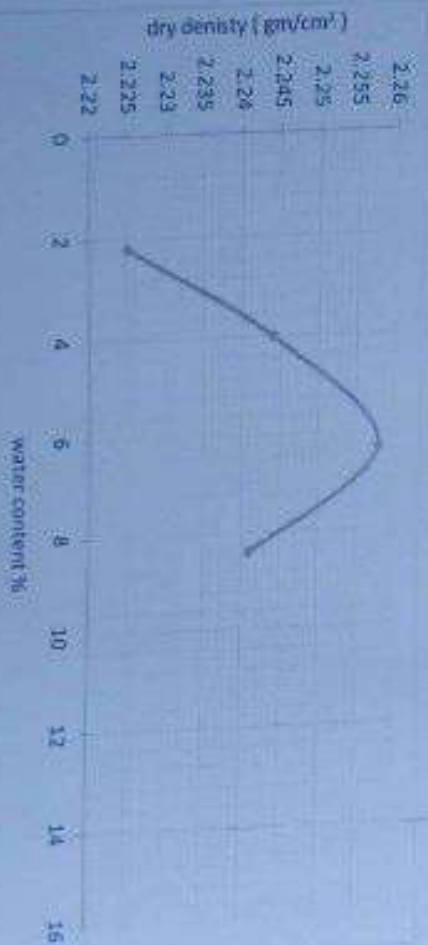
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مكتب معامل الاستشارات الهندسية
مشاريع ومعاملات الوجه القبلي

Company Name : شركة الإيجان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+800
Type of sample : مخون 1
Delivery Date : 17/07/2023
Reporting Date : 22/07/2023
Reporting No. : EM-S-3

Moisture - Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 2.238
- Optimum moisture content % : 6.3%

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Tel & Fax : 27367291 - 27363093

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Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+800
Type of sample : مشون 1
Delivery Date : 17/07/2023
Reporting Date : 22/07/2023
Reporting No. : EM-S-3

Test Results of California Bearing Ratio on Base Materials ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.56
1.27	0.050	1.14
1.91	0.075	1.96
2.54	0.100	2.97
3.18	0.125	3.62
3.81	0.150	4.33
4.45	0.175	4.84
5.08	0.200	5.58
6.35	0.250	6.72

CBR Result	Stress (Mpa)		CBR 100 %
At 0.4 inch (10.16 mm) penetration	St. Value	Sample results	43 %
	6.90	2.97	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of $\approx 2.258 \text{ (gm/cm}^3\text{)}$
At = 6.35 mm penetration
- 3- Surface area = 300 cm²
- 4- CBR > 10 mm penetration shall follow embankments according project spec page No 36.

Signature

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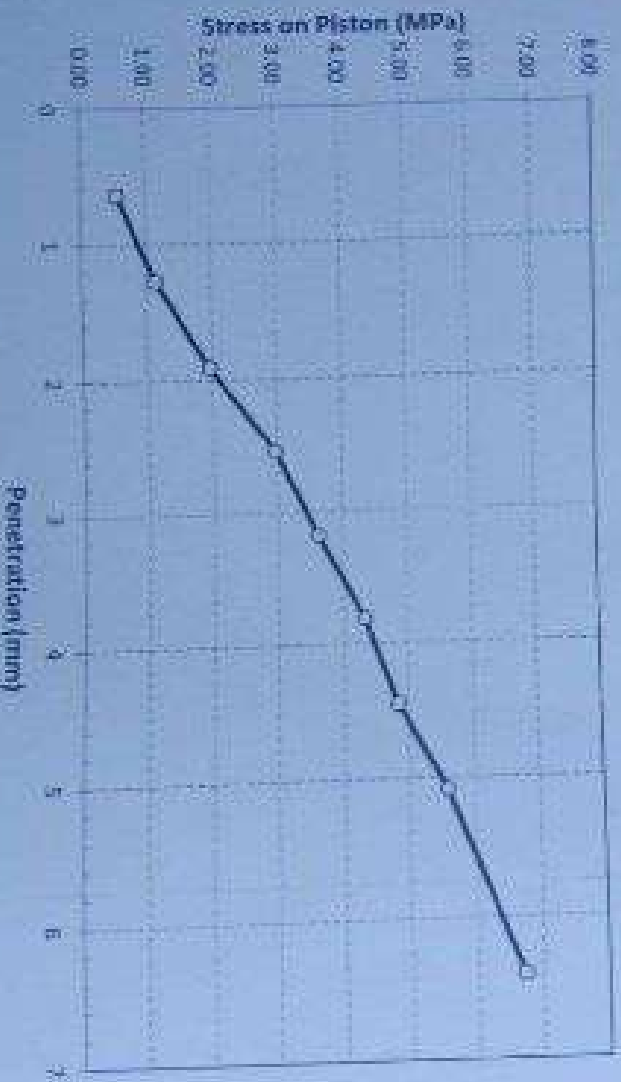
مكتب هندسة البحوث والمختبرات

مبنى رقم 10، شارع مصر، القاهرة

Company Name : شركة الجي.إي.إل
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+800
Type of sample : 1 Core
Delivery Date : 17/07/2023
Reporting Date : 22/07/2023
Reporting No. : EM-S-3

Load Penetration Curve of CBR Test

ASTM D-1583



Signature



303 Malek El Afendi Street
Zamalek, Cairo.
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ش. الهندسة والاختبار
القاهرة - مصر
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F: 27360994
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100	90	80	70	60	50	40	30	20	10	0
-----	----	----	----	----	----	----	----	----	----	---

40-100 mg	12-1000 mg/die
Depot Injections	For Monotherapy only. Start low. Tit. Up
With Risperidone	
a. Form of Aripiprazole	

Comments by: *5000ms 6/10/2023 2:00 PM*

Journal of Management Education

MATERIAL INSPECTION REQUEST



Contractor Company	البحر		Designer Company	K.K
Issued by Contractor	Name	Sign	Date	Time
Contractor Reference	EM-S-3		21-7-2023	
Received by ER			MIR	

Code 1	11 to 201	01 to 31	01 to 31
Code 2	Material Reference	Project Reference	Project Reference
Code 3		Work Activity	Sub Element of Activity

REPLACEMENT FILL MATERIAL RESULTS					
Description of Materials	Quantity	Level	From	To	Code
Location to be Used	1208.25	1.5-	558+600	558+700	EM-ME-08-02
	1054.02	2-	558+840	559+020	EM-ME-09-
	24.15	2.5-	558+820	558+940	EM-ME-10
	750.38	1.5-	558+200	559+320	EM-UM-02-02
	483	1.75-	558+940	559+020	EM-ME-11-02
	228.76	2-	558+920	559+940	EM-ME-12
	261	1.75-	559+160	559+200	EM-UM-03
	728.81	1-	559+200	559+310	EM-UM-05
	Total (m3)				
	4739.4				

Item	Description	Unit	Quantity	Arrival Date	Name
1	L.L & P.L & O.M.C %	M8	5000	16-07-2023	
2	Proctor	M8	8000	16-07-2023	
3	Classification	M3	9000	16-07-2023	
4	Sieve Analysis	M3	5000	16-07-2023	
5	C.R.R	M3	5000	21-07-2023	

Comments by:					
البحر					
21-7-2023					
A.A.W.C.R					



Testing date

21/7/2023

Company Name

شركة كيم

Project

Electric Express Train - HSR From Sohag to Qena

S. Description

سجدة

Station

EST: 558-800

Direction

Right

C code

EM-S-3

• Sieve Analysis:

Sieve size (mm)	Passing %
2	98.0
1.5	95.2
1	88.5
¾	81.7
¾	70.4
¾	67.1
3/8	59.4
4	54.7
10	45.5
40	9.7
200	

Test	Results	
	A1-b	
Soil Classification		
Modified Proctor	Max Dry Density	2.332
	DAFC	59
LL	NP	
PL	NP	
GMC	40.3%	

Notes:.....

Lab (CEM)

Lab Engineer
Signature: 21/7/2023

Consultant (K.K.)

Engineer
Signature: 21/7/2023



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مكتب معامل الاستشارات الهندسية

مقر وعمل معاملات الوجه القبلي

Company Name : شركة النيل
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+800
Type of sample : طين 1
Delivery Date : 15/07/2023
Reporting Date : 21/07/2023
Reporting No. : EM-S-3

Dear Gentleman :

Attached here with the delivered on 15/07 / 2023 :

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Notes: The soil sample delivered by the client to our laboratory and the laboratory is responsible for the test results (if it taken).

Signature: 
Signature: 

3 El Mahdi El Agha Street
Zamalek, Cairo
Tel & Fax : 27367231 - 27361005



شركة النيل
الوجه القبلي - 30101
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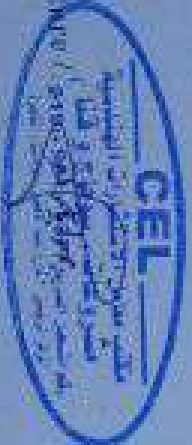
مكتب دراسات الاستشارات الهندسية

مقر ومختبر العلاقات الدولية بالقاهرة

Company Name : شركة النيل
Project : Electric Express Train - HSR From Sohag To Qena
Location : Km: 558+800
Type of sample : طين 1
Delivery Date : 15/07/2023
Reporting Date : 21/07/2023
Reporting No. : EMI-S-3

RESULTS OF SIEVE ANALYSIS According to ASTM D-422

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	96.0
30.5	1.5	95.2
25	1	88.5
19	3/4	81.7
12.50	1/2	70.4
9.50	3/8	62.1
4.75	4	59.4
2.00	10	54.2
0.425	40	45.8

Signature : 
CEL
مكتب دراسات الاستشارات الهندسية
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Tel & Fax : 27367201 - 27367093

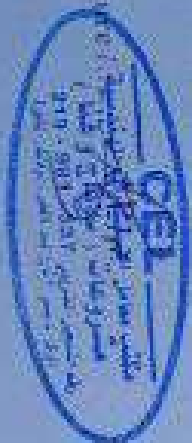
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Materials finer than 75 μm (no. 200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μm (No. 200)	9.7%

2007



2014 November 13, Atlanta, Georgia

Experiments 4 and 5

TEL: 0031-20-671231 - 27.94.3100



References

THE UNIVERSITY OF CHICAGO

$$E_{\text{eff}}^2 = E^2 - 4\mu^2 = 4\mu^2 \gamma^2 (1 - \beta^2) = 4\mu^2 \gamma^2 (1 - \beta^2 \gamma^2) = 2\mu^2 \gamma^2 (1 + \beta^2)$$
www.scribd.com/doc/10041444



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Company Name : شركة الإيجل
Project : Electric Express Train - HSR From Sohag To Qena
Location : Site 558+800
Type of sample : طين 1
Delivery Date : 15/07/2023
Reporting Date : 21/07/2023
Reporting No. : F.MI-S.A

Results of liquid limit and plasticity index
of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

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مشروعات محافظات الوجه القبلي

Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+800
Type of sample : مشون 1
Delivery Date : 15/07/2023
Reporting Date : 21/07/2023
Reporting No. : EM-S-3

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
Group Classification	(A-1-b)			
2.00 mm (No. 10)	54.7	Max 50 %	-----	-----
0.425 mm (No. 40)	45.6	Max 30 %	Max 50 %	-----
0.075 mm (No. 200)	9.7	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	NP	-----	-----	-----
Plasticity Index	NP	Max 6 %	Max 6 %	Max 10 %

The test results are (☒ Comply - ☐ Not Comply) with specifications limits

Signature



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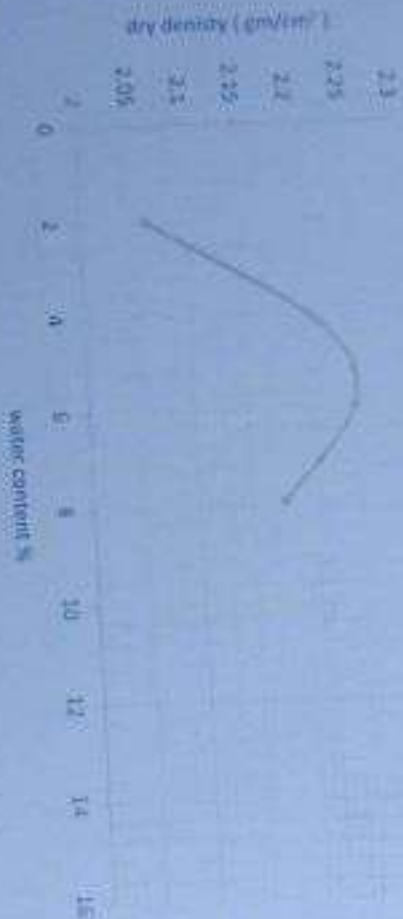
مشروعات محافظات الوجه القبلي والوجه الجديد

Electric Express Train - HSR From Sohag To Qena

Company Name :
Project :
Location :
Type of sample :
Delivery Date :
Reporting Date :
Reporting No. :

مبنى 1
15/07/2023
21/07/2023
ENI-S-3

Moisture - Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



• Max dry density (gm/cm³) : 2.252

• Optimum moisture (%) : 15.9%

Signature :
CEL
مكتب معامل الاستشارات الهندسية
شارع النيل - القاهرة
21/07/2023

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Company Name : Electric Express Train - HSR From Sohag To Qena

Project : SE: 558+800

Location : صقون ١

Type of sample : 150/72023

Delivery Date : 21/07/2023

Reporting Date : FM-S-3

Reporting No. :

Test Results of California Bearing Ratio on Base Materials

ASTM D 1883

penetration		stress on piston (Mpa)	
mm	Inch		
0.64	0.025	0.19	
1.27	0.050	0.84	
1.91	0.075	1.70	
2.54	0.100	2.78	
3.18	0.125	3.91	
3.81	0.150	5.14	
4.45	0.175	6.41	
5.08	0.200	7.54	
6.35	0.250	9.65	
CBR Result		Stress (Mpa)	
at 1.25 inch (31.8 mm) penetration	40 Value	Sample results	CBR 100 %
	0.99	2.78	40.3%

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of = 2.152 (gm/cm³).
- 3- Sectional limit 1.50 Kg.
- 4- CBR is in the range of 40.3%.

Signature:

Dr. Mohamed El-Sayed
 (Signature)
 010 2000 7000
 010 2000 7000

3 El Mohab, 23 Aved Street

Zamalek, Cairo

Tel & Fax : (02) 772231 - 2734000



إلى مكتب الاستشارات
 010 2000 7000
 010 2000 7000
 010 2000 7000

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مكتب محاسن الاستشارات الهندسية

مقر العمل: القاهرة - الجيزة - الأقصر

Company Name : شركة المحسن

Project : Electric Express Train - HSR From Sahag To Qena

Location : St: 558-800

Type of sample : 1 جولة

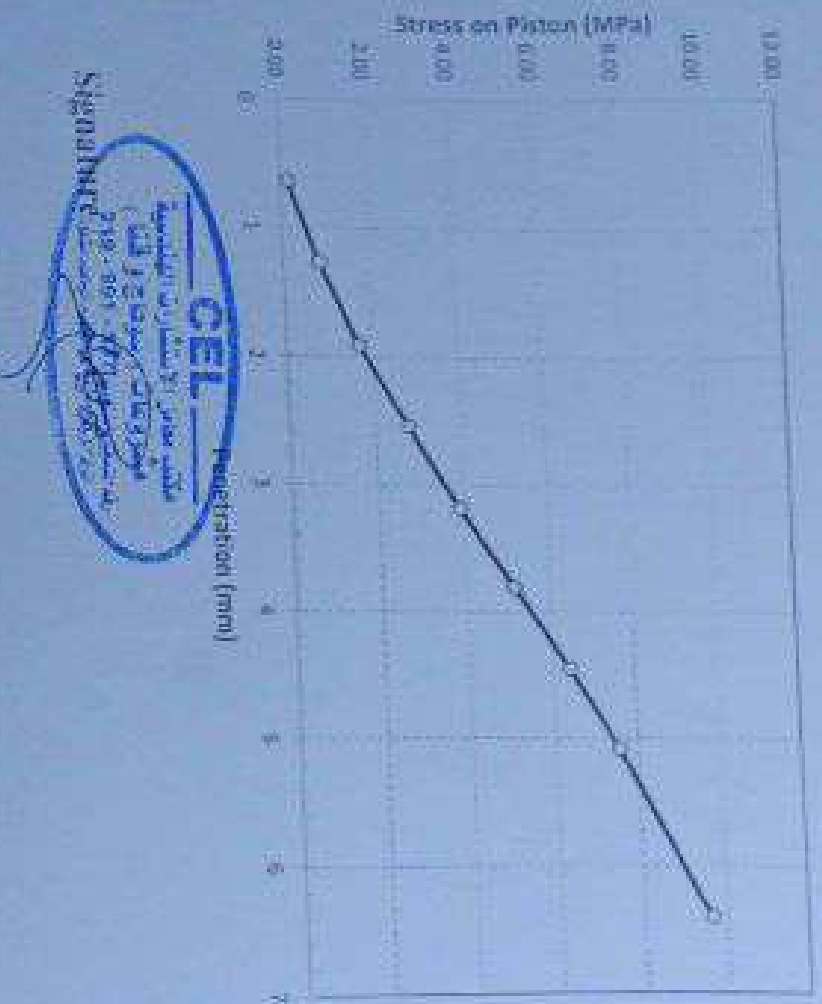
Delivery Date : 15/07/2023

Reporting Date : 21/07/2023

Reporting No : FM-S-3

Load Penetration Curve of CBR Test

ASTM D-1883



3 El Mahak El Aghal Street

Zamalek, Cairo.

Tel: 8767291 - 2796905

IAS
ASTM D-1883
Testing Laboratory

رقم الترخيص: 145/1
الترخيص: 145/1
الترخيص: 145/1
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MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	K.K										
Issued by Contractor	Name	Sign	Date	Time										
	كريم السيد	كريم السيد	28-5-2023											
Contractor Reference	EM-S-2													
Received by ER			<table border="1"> <tr> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		DD	MM	YY	HH	MM					
DD	MM	YY	HH	MM										

CODE: 1	50 to 521	01 to 53	Kg XXX Note
CODE: 2	Station Reference	Depot Reference	For kilogram point only Start size is used
CODE: 3		Work Activity	
		Sub Element of Activity	

Description of Materials	Soil (A-1-b)			
Location to be Used	558+880			
Item	specification	Test requirement	Test result attachment	Remarks
1	ASTM C 136	Sieve Analysis	According to specifications	
2	ASTM D 1140	Passing Sieve, No 200	7.3	
3	ASTM D 4318	Atterberg limit	N.P	
4	ASTM D 2974	Moisture content	6.4	
5	ASTM D 1557	Modified proctor	2.20	
6	ASTM D 1883	CBR	44.10	
Comments by:		Comments by:		
		تم اعتماد ملصقة مسو ر ثرية للمسحرة فلكي لبرالين 5000		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-JWC-R
Contractor	كريم السيد	كريم السيد	28-5-2023	
QAYGC*	م. م. م. م.	م. م. م. م.	28-5-2023	
GARB**				
Employers Representative				

* Designer
** Engineer/Manager, Civilian only



Testing date : 28/5/2024

Company Name : شركة ك.ك.ا

Project : Electric Express Train - HSR From Sobag to Qena

Station : ST: 558+880

S. Description : 2 طبق

Code : EMI-S-2

Soil Analysis:

Sieve size (DN)	Passing %
2	100
1.5	98.2
1	89.7
3/4	85.5
3/8	76.0
4	71.4
10	61.8
40	59.4
200	37.4
	7.3

Test	Results	
Soil Classification	A-1-b	
Modified Proctor	Max Dry Density	2.20
	OMC	6.4%
L.L	NP	
P.L	NP	
CBR	44.1	

Notes:

Lab (CEI)

Lab. Engineer

Signature

Consultant (K.K.A)

Engineer

Signature



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مكتب معامل الاستشارات الهندسية

مشاريع ومعاملات الوجه القبلي

Company Name : شركة الإيجان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+880
Type of sample : مخرن
Delivery Date : 22/5/2023
Reporting Date : 28/5/2023
Reporting No. : 02

Dear Gentleman,

Attached here with the delivered on 22 / 5 / 2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signature

313 Madaek El Ahdal Street
Zamalek, Cairo
Tel & Fax : 27367211 - 27363093



ش. المعاملات والاختبار
الزمالك - القاهرة
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مكتب محاسن الاستشارات الهندسية
مختبرات محاسن الاختبارات الهندسية

Company Name : شركة الإيجل
Project : Electric Express Train – HSR From Sobag To Qena
Location : St: 558+880
Type of sample : طوبن
Delivery Date : 22/5/2023
Reporting Date : 28/5/2023
Reporting No. : 02

RESULTS OF SIEVE ANALYSIS According to ASTM D-422

Sieve Size (mm)	Sieve Size (No)	Passing %
50	2	100
37.5	1.5	98.2
25	1	89.7
19	3/4	85.5
12.50	1/2	76.0
9.50	3/8	71.4
4.75	4	61.8
2.00	10	53.4
0.425	40	37.4

Signature

2 TO Mark In Affidavit

Representative

Cell No: 27067231 - 27067230



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مكتب معامل الاستشارات الهندسية

مشروعات محالطات الوجه القبلى

Company Name : شركة الإيجان

Project : Electric Express Train – HSR From Sohag To Qena

Location : St: 558+880

Type of sample : مبلون

Delivery Date : 22/5/2023

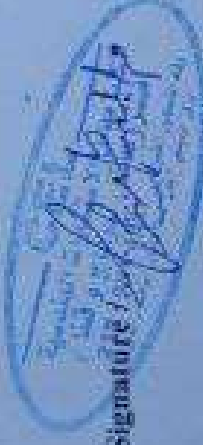
Reporting Date : 28/5/2023

Reporting No. : 02

Materials finer than 75 μ m (no.200) sieve

By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	7.3

Signature: 

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مكتب معامل الاستشارات الهندسية

مشاروعات محافظات الوجه القبلي

Company Name : شركة الإيجان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558-880
Type of sample : مشون
Delivery Date : 22/5/2023
Reporting Date : 28/5/2023
Reporting No. : 02

Results of liquid limit and plasticity index of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

Signature

مختبر معملات
مشاروعات محافظات الوجه القبلي
28/5/2023

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Company Name : شركة الإيجان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+880
Type of sample : مشون
Delivery Date : 22/5/2023
Reporting Date : 28/5/2023
Reporting No. : 02

Soil Classification

TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)
2.00 mm (No. 10)	53.4	Max 50 %	-----
0.425 mm (No. 40)	37.4	Max 20 %	Max 50 %
0.075 mm (No. 200)	7.3	Max 15 %	Max 15 %
Liquid Limit		-----	-----
Plasticity index	NP	Max 6 %	Max 6 %
			Max 10 %

The test results are (☒ Comply - ☐ Not Comply) with specifications limits

Signature

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مكتب معامل الاستشارات الهندسية

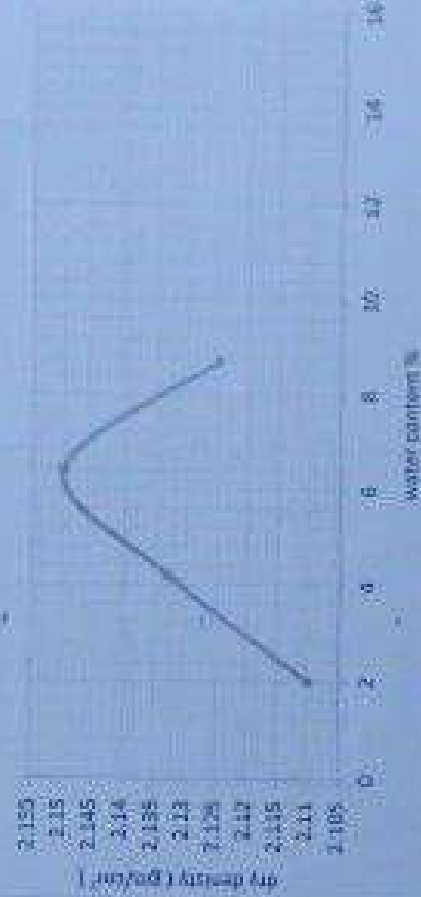
مشاروعات محالقات الوجه القبل

Company Name : شركة الإيوان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+880
Type of sample : مئون
Delivery Date : 22/5/2023
Reporting Date : 28/5/2023
Reporting No. : 02

Moisture – Density relation of soil

Test result (Modified proctor test)

ASTM D-1557



• Max dry density (gm/cm³) : 2.145

• Optimum moisture content % : 7.4%

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مكتب معامل الاستشارات الهندسية

مقرات مكاتبات الوجة القبلى

Company Name : شركة الإيجان :

Project : Electric Express Train – HSR From Sohag To Qena

Location : ST: 558+880

Type of sample : مشون :

Delivery Date : 22/5/2023

Reporting Date : 28/5/2023

Reporting No. : 02

Test Results of California Bearing Ratio on Base Materials

ASTM D 1883

mm	penetration		stress on piston (Mpa)
	inch		
0.64	0.025		0.41
1.27	0.050		1.01
1.91	0.075		1.93
2.54	0.100		3.04
3.18	0.125		4.06
3.81	0.150		5.07
4.45	0.175		5.93
5.08	0.200		6.59
6.35	0.250		7.10
CBR Result	Stress (Mpa)		CBR 100 %
At 0.1 inch (2.54 mm) penetration	St. Value	sample results	44.1 %
	6.90	3.04	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- This sample was compacted to dry density of = 2.15 (gm /cm³)
At = 6.4 % optimum water content.
- 3- Spacing of load 4.250 Kg.

4- CBR > 10 for mid and fine grad embankments according to project spec. page No 36.

Signature :

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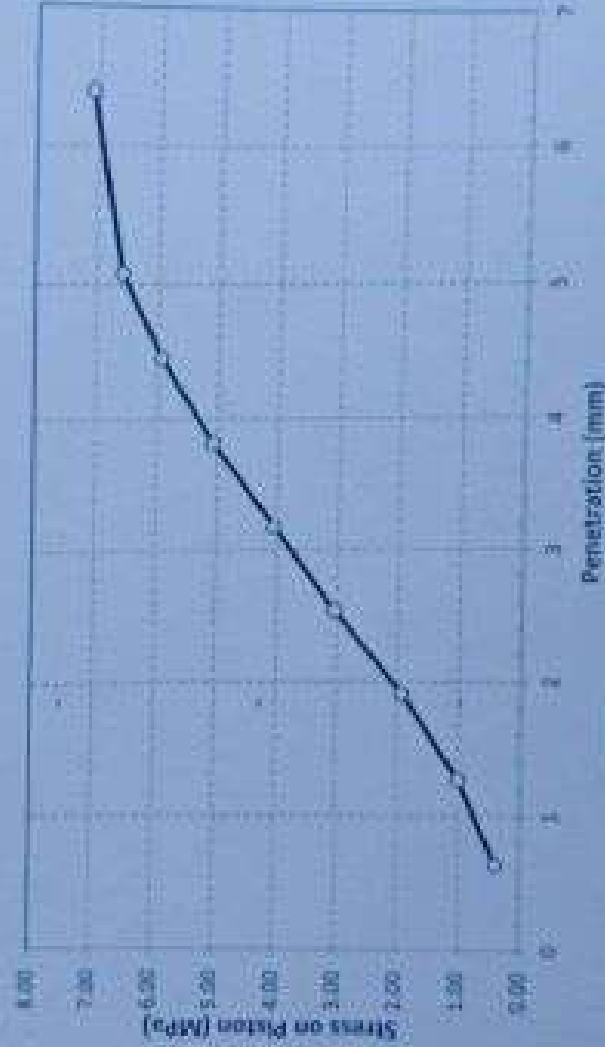
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مكتب معمار الاستشارات الهندسية

مستويات معادلات الوجه القبلي

Company Name : شركة الإيجان
Project : Electric Express Train - HSR From Sohag To Qena
Location : Str: 558-880
Type of sample : ماسون
Delivery Date : 22/5/2023
Reporting Date : 28/5/2023
Reporting No. : 02

Load Penetration Curve of CBR Test ASTM D-1883



Signature

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Zamalek, Cairo
Tel & Fax : 27367231 - 27367000

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Testing date : 9/4/2023
Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag to Qena
Station : ST: 558+800
S. Description : مشون
Code : EM-S-1

• Sieve Analysis:

Sieve size (IN)	Passing %
2	100
1.5	95.9
1	68.3
3/4	80.7
3/8	70.3
3/8	66.7
4	57.2
10	54
40	38.7
200	7.2

Test	Results	
Soil Classification	A-1-b	
Modified Proctor	Max Dry Density	2.247
	O.M.C	6.4%
L.L	NP	
P.I	NP	
CBR	16.1 %	

Notes:

Lab (CEL)

Lab. Engineer

Signature

.....

Consultant (K.K.)

Engineer

Signature

.....

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مكتب معامل الاستشارات الهندسية

مشروعات محافظات الوجه القبلي

Company Name : شركة الأمان للمقاولات العامة
Project : Electric Express Train - HSR From Sohag To Qena
Location : ST: 558+800
Type of sample : ملون
Delivery Date : 3/4/2023
Reporting Date : 9/4/2023
Reporting No. : EM-S-1

Dear Gentleman,

Attached here with the delivered on 3 / 4 / 2023

Materials Test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883.

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signature: 



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Zamalek, Cairo
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- **Electric Express Train – HSR from Beijing To Qian**
- **ST : 558+800**
- **China**
- **3/4/2023**
- **4/4/2023**
- **EM-8-1**

RESULTS OF SILVER ANALYSIS According to ASTM D-477

Sieve Size (mm)	Sieve Size (PS)	Passing %
50	2	100
37.5	1.5	95.9
25	1	98.3
19	¾	80.7
12.50	½	70.3
9.50	3/8	66.7
4.75	4	45.2
2.00	10	5.4
0.425	40	38.7

2000

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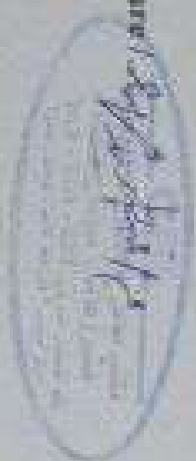
1. $\frac{1}{2} \log \frac{1}{2}$
 2. $\frac{1}{2} \log \frac{1}{2}$
 3. $\frac{1}{2} \log \frac{1}{2}$
 4. $\frac{1}{2} \log \frac{1}{2}$
 5. $\frac{1}{2} \log \frac{1}{2}$
 6. $\frac{1}{2} \log \frac{1}{2}$
 7. $\frac{1}{2} \log \frac{1}{2}$
 8. $\frac{1}{2} \log \frac{1}{2}$
 9. $\frac{1}{2} \log \frac{1}{2}$
 10. $\frac{1}{2} \log \frac{1}{2}$

Company Name : شركة الهندسة والبناء
Project : Electric Express Train - ESR From Soling To Qura
Location : ST : 558+600
Type of sample : 0.075
Delivery Date : 3/4/2023
Reporting Date : 4/4/2023
Reporting No. : E.M.S-1

Materials Finer than 75 μ m (No. 200) sieve
By washing ASTM D-1140

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No. 200)	7.1

Signature: 



Company Name : **مكتب استشارات الهندسة**
Project : **مكتب استشارات الهندسة**
Location : **مكتب استشارات الهندسة**
Type of sample : **مكتب استشارات الهندسة**
Delivery Date : **3/4/2023**
Reporting Date : **4/4/2023**
Reporting No. : **EM-S-1**

**Results of liquid limit and plasticity index
of soils according to ASTM D-4318**

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

Signature : 


TEST	Results (%)	Limits according to Project Specs		
Group Classification	(A-1.0)	(A-1.0)	(A-1.0)	(A-2.4)
2.00 mm (No.10)	84	Max 50 %	—	—
0.425 mm (No. 40)	38.7	Max 30 %	Max 50 %	—
0.075 mm (No. 200)	7.2	Max 15 %	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)				
Liquid Limit	—	—	—	—
Plasticity Index	NP	Max 6 %	Max 6 %	Max 10 %

Summary

IAS

1. $\frac{1}{2} \log \frac{1}{2}$
 2. $\frac{1}{2} \log \frac{1}{2}$
 3. $\frac{1}{2} \log \frac{1}{2}$
 4. $\frac{1}{2} \log \frac{1}{2}$
 5. $\frac{1}{2} \log \frac{1}{2}$
 6. $\frac{1}{2} \log \frac{1}{2}$
 7. $\frac{1}{2} \log \frac{1}{2}$
 8. $\frac{1}{2} \log \frac{1}{2}$
 9. $\frac{1}{2} \log \frac{1}{2}$
 10. $\frac{1}{2} \log \frac{1}{2}$

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مكتب معامل الاستشارات الهندسية

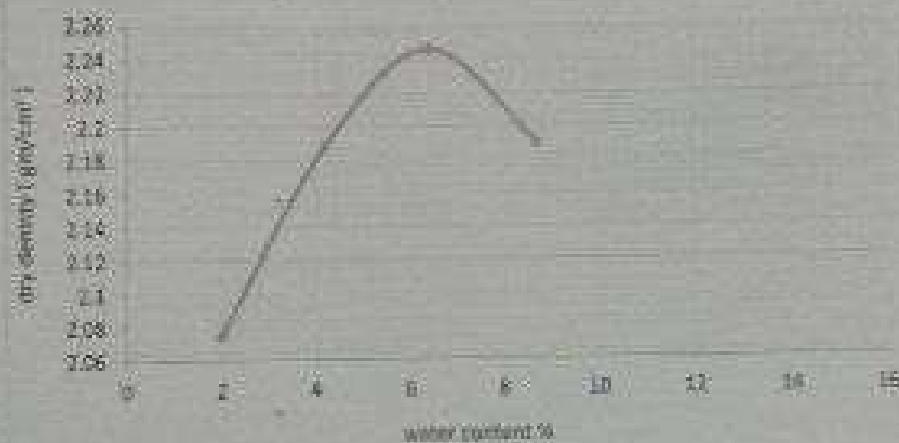
مشاريع ومعدات معالجات المياه

Company Name : شركة الإيمان للمقاولات العامة
Project : Electric Express Train - HSR From Sohag To Qena
Location : ST: 558+800
Type of sample : مشون
Delivery Date : 3/4/2023
Reporting Date : 5/4/2023
Reporting No. : EM-S-1

Moisture - Density relation of soil

Test result (Modified proctor test)

ASTM D-1557



- Max dry density (gm/cm³) : 2.147
- Optimum moisture content % : 6.4%

Signature :

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Company Name : شركة الإيمان للمقاولات العامة
Project : Electric Express Train - HSR From Sohag To Qena
Location : ST: 558+800
Type of sample : مئون
Delivery Date : 3/4/2023
Reporting Date : 9/4/2023
Reporting No. : EM-S-1

Test Results of California Bearing Ratio on Base Materials
ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.14
1.27	0.050	0.43
1.91	0.075	1.02
2.54	0.100	2.07
3.18	0.125	3.51
3.81	0.150	5.54
4.45	0.175	7.90
5.08	0.200	10.10
6.35	0.250	14.10

CBR Result	Stress (Mpa)		CBR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	38.1 %
	6.90	2.07	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of $\rho = 2.247 \text{ (gm/cm}^3\text{)}$
At = 6.4 % optimum water content.
- 3- Surcharge load 4.50 Kg.
- 4- CBR > 10 for middle and lower embankments according project spec page No 36.

Signature /

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Testing date : 10/10/2023
 Company Name :
 Project : Electric Express Train - HSR From Sohag to Qena
 Station : ST: 558+550 Zone from 558+540 to 558+560
 S. Description :
 Level :
 Layer Thickness : 0.25
 Code : EM-L3

Sieve Analysis:

Sieve size (mm)	Passing %
2	98.6
1.5	94.9
1	88.6
0.75	85.5
0.6	77.1
0.5	73.8
0.425	66.6
0.375	60.3
0.3	47.7
0.25	7.5

Test	Results	
Soil Classification	A-1-b	
Modified Proctor	Max Dry Density	2.181
	OMC	6.4 %
L. L	NP	
P. I	NP	
CBR		

Notes:

Lab (CEL)

Lab Engineer

Signature



Consultant (K.K.)

Engineer

Signature



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مكتب معامل الاستشارات الهندسية
مشاريع ومات محالطات الوحدة القبلية

Company Name : الإيصال
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+550 Zone from 558+540 to 558+560
Type of sample : عينة من القطاع
Delivery Date : 9/10/2023
Reporting Date : 10/10/2023
Reporting No. : EM-L-3

Dear Gentleman,

Attached here with the delivered on 9/10/2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signature



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مشاريع محافظات الوجه القبلي

Company Name : الإيمن
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+550 Zone from 558+540 to 558+560
Type of sample : عينة من القطع
Delivery Date : 9/10/2023
Reporting Date : 10/10/2023
Reporting No. : EM-L-3

RESULTS OF SIEVE ANALYSIS According to ASTM D-422

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	98.6
37.5	1.5	94.9
25	1	88.6
19	3/4	85.5
12.50	1/2	77.3
9.50	3/8	73.8
4.75	4	66.6
2.00	10	60.3
0.425	40	47.7

Signature



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مشاريع محافظات الوجه القبلي

Company Name : الإيمن
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+550 Zone from 558+540 to 558+560
Type of sample : عينة من القطاع
Delivery Date : 9/10/2023
Reporting Date : 10/10/2023
Reporting No. : EM-L-3

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	7.5%

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مكتب معامل الاستشارات الهندسية

عشر و ثمان مئة طمات الوجه القبلي

Company Name : **البي**

Company Name	Project
CS&I	Electric Express Train - HSR From Sohang To Qian

Location
; St: 558+550 Zone from 558+540 to 558+560

Type of sample : عينة من القطاع :

Delivery Date : 9/10/2023

Reporting Date : 10/10/2023

Reporting No. : EM-1-3

Results of liquid limit and plasticity index of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

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توزيع: مكتبة معاصر
2008-004-807

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مكتب معامل الاستشارات الهندسية
مشروعات محافظات الوجه القبلي

Company Name : الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+550 Zone from 558+540 to 558+560
Type of sample : عينة من القطاع
Delivery Date : 9/10/2023
Reporting Date : 10/10/2023
Reporting No. : EM-L-3

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No. 10).	60.3	Max 50 %	-----	-----
0.425 mm (No. 40).	47.7	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	7.5	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	NP	-----	-----	-----
Plasticity Index	NP	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature /



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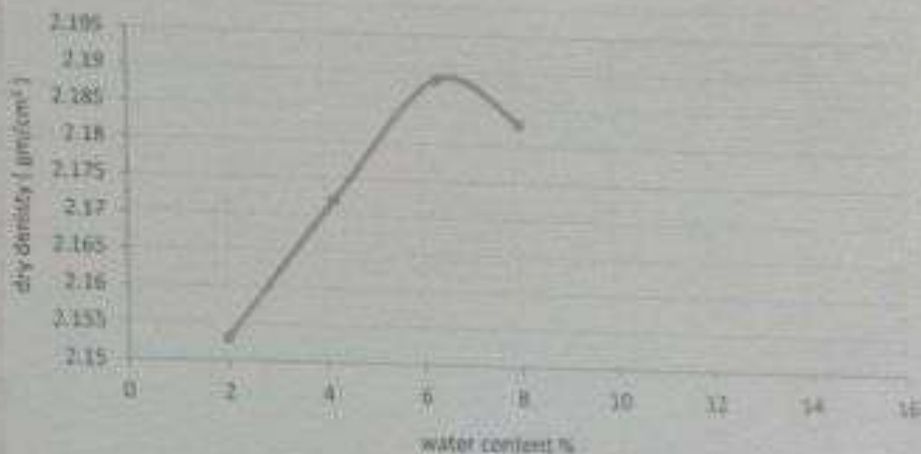
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مشاريع محافظات الوجه القبلي

Company Name : الإيمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+550 Zone from 558+540 to 558+560
Type of sample : عينة من القطاع
Delivery Date : 9/10/2023
Reporting Date : 10/10/2023
Reporting No. : EM-1-3

Moisture – Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 2.189
- Optimum moisture content % : 6.4 %

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Testing date : 21/9/2023
 Company Name : (شركة)
 Project : Electric Express Train - HSR From Soling to Qena
 Station : ST : 310+220 Zone from 559+220 to 559+280
 S. Description : طابق من طابقين
 Level : -0.50M
 Layer Thickness : 0.25M
 Code : EM-L-1
 Sieve Analysis:

Sieve size (IS)	Passing %
2	94.6
1.5	91.6
1	83.3
¾	76.6
½	63.9
3/8	59.3
4	51.5
10	47.2
40	35.5
200	8.6

Test	Results	
Soil Classification	(A-1-b)	
Modified Proctor	Max Dry Density	2.256
	O.M.C	5.7%
L.L	NP	
P.I	NP	
CBR	31.4%	

Notes:.....

Lab (CEL)
 Lab Engineer
 Signature

Consultant (K.K.)
 Engineer
 Signature

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مكتب دراسات الاستشارات الهندسية
مختبرات ميكانيكا التربة والمباني الإنشائية

Company Name :
Project : Electric Express Train - HSR From Sohar To Qena
Location : St. 559+289 Zone from 559+220 to 559+289
Type of sample : طينة من الطريق
Delivery Date : 14/9/2023
Reporting Date : 21/9/2023
Reporting No. : EM-1-1

Dear Gentleman,

Attached here with the delivered on 14 / 9 / 2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signature: 

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مكتب معامل الاستشارات الهندسية

Company Name : مشروعات محافظات الوجه القبلي الأيمان

Project : Electric Express Train - HSR From Sohag To Qena

Location : St: 559+280 Zone from 559+220 to 559+280

Type of sample : عينه من القطاع

Delivery Date : 14/9/2023

Reporting Date : 21/9/2023

Reporting No. : EM-L-1

RESULTS OF SIEVE ANALYSIS According to ASTM D-422

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	94.6
37.5	1.5	91.6
25	1	83.3
19	¾	76.6
12.50	½	63.9
9.50	3/8	59.3
4.75	4	51.5
2.00	10	47.2
0.425	40	36.5

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Company Name : مشروعات محافظات الوجه القبلي الايمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 559+280 Zone from 559+220 to 559+280
Type of sample : عينه من القطاع
Delivery Date : 14/9/2023
Reporting Date : 21/9/2023
Reporting No. : EM-L-1

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	8.6%

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Company Name : مشروعات محافظات الوجه القبلي الايمان

Project : Electric Express Train - HSR From Sohag To Qena

Location : St: 559+280 Zone from 559+220 to 559+280

Type of sample : عينه من القطاع

Delivery Date : 14/9/2023

Reporting Date : 21/9/2023

Reporting No. : EM-L-1

Results of liquid limit and plasticity index
of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP



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مكتب معامل الاستشارات الهندسية

Company Name : مشروعات محافظات الوجه القبلى الايمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 559+280 Zone from 559+220 to 559+280
Type of sample : عينه من القطاع
Delivery Date : 14/9/2023
Reporting Date : 21/9/2023
Reporting No. : EM-L-1

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
Group Classification	(A-1-b)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No. 10)	47.2	Max 50 %	-----	-----
0.425 mm (No. 40)	35.5	Max 30 %	Max 50 %	-----
0.075 mm (No. 200)	8.6	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	NP	-----	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature



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مكتب معامل الاستشارات الهندسية

Company Name : مشروعات محافظات الوجه القبلي الأيمان

Project : Electric Express Train - HSR From Sohag To Qena

Location : St: 559+280 Zone from 559+220 to 559+280

Type of sample : عينة من القطاع

Delivery Date : 14/9/2023

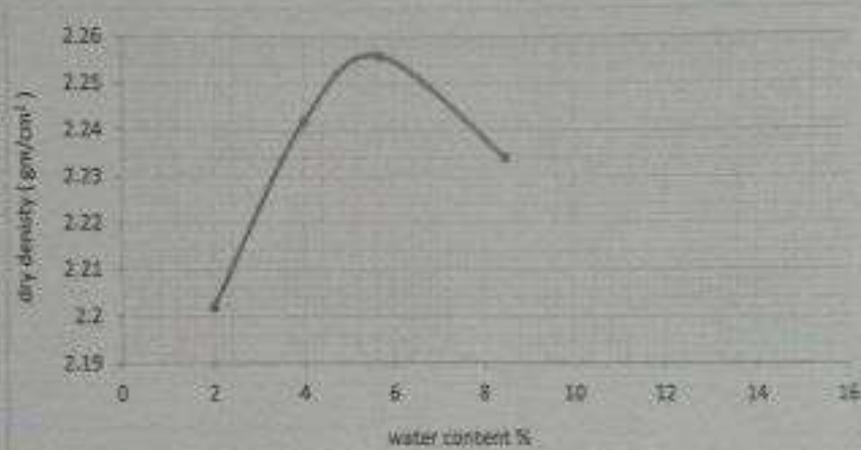
Reporting Date : 21/9/2023

Reporting No. : EM-L-1

Moisture - Density relation of soil

Test result (Modified proctor test)

ASTM D-1557



• Max dry density (gm/cm³) : 2.256

• Optimum moisture content % : 5.7%

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مشروعات محافظات الوجه القبلي

Company Name : (العميل)
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 559+280 Zone from 559+220 to 559+280
Type of sample : عينة من الطرّاع
Delivery Date : 14/9/2023
Reporting Date : 21/9/2023
Reporting No. : EM-L-1

Test Results of California Bearing Ratio on Base Materials

ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.44
1.27	0.050	0.98
1.91	0.075	1.66
2.54	0.100	2.31
3.18	0.125	2.89
3.81	0.150	3.48
4.45	0.175	4.00
5.08	0.200	4.55
6.35	0.250	5.36

CBR Result	Stress (Mpa)		CBR 100 %
At 6.1 inch (2.54 mm) penetration	St. Value	Sample results	33.4%
	6.90	2.31	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of $\approx 2.256 \text{ (gm/cm}^3\text{)}$
At ≈ 5.7 % optimum water content.
- 3- Surcharge load $\approx 4.5 \text{ kg/cm}^2$.
- 4- CBR is 45% based on the test results according to project spec page No 35.

Signature /

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مكتب معامل الاستشارات الهندسية
مشروعات محافظات الوجه القبلي

Company Name : الأيمان

Project : Electric Express Train - HSR From Sohag To Qena

Location : St: 559+280 Zone from 559+220 to 559+280

Type of sample : عينه من القطاع

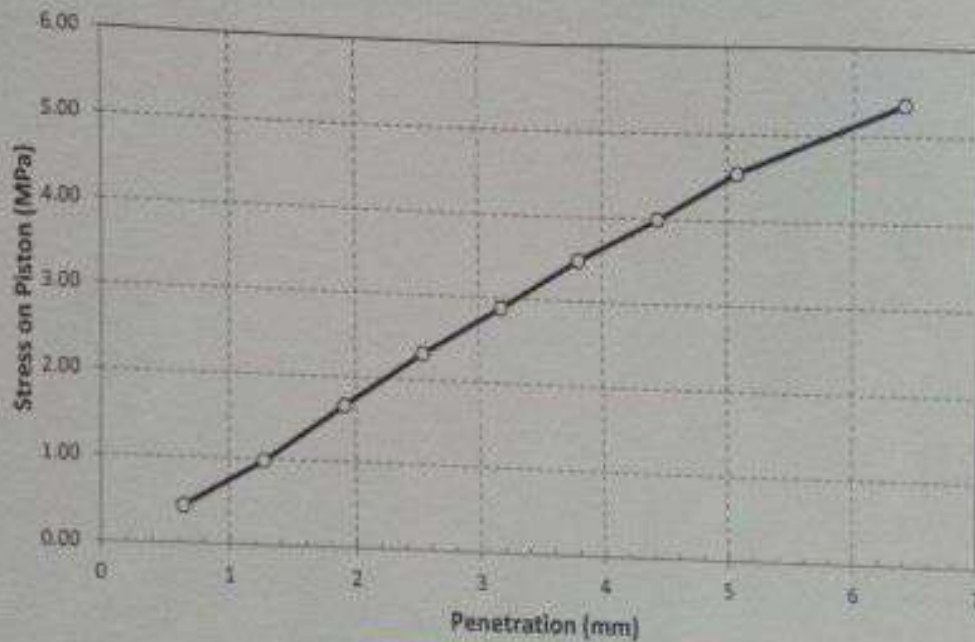
Delivery Date : 14/9/2023

Reporting Date : 21/9/2023

Reporting No. : EM-L-1

Load Penetration Curve of CBR Test

ASTM D-1883



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Testing date : 30/9/2023

Company Name : شركة

Project : Electric Express Train - HSR From Sohag to Qena

Station : ST: 558+040 Zone from 557+960 to 558+260

Level : Original Earth

S. Description : Boreholes

Code : 08

Sieve Analysis:

Sieve size (IN)	Passing %
2	100.0
1.5	94.5
1	90.9
¾	89.6
½	86.9
3/8	85.5
4	82.3
10	79.0
40	65.4
200	14.3

Test	Results	
Soil Classification	A-2-4	
Modified Proctor	Max Dry Density	2.117
	O.M.C	6.4 %
L.L	NP	
P.I	NP	
CBR	27.6 %	

Notes:.....

Lab (CEL)

Lab. Engineer

Signature

Consultant (K.K.)

Engineer

Signature



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مكتب معامل الاستشارات الهندسية
مشروعات محافظات الوجه القبلي

Company Name : الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+040 Zone from 557+960 to 558+260
Type of sample : Original Earth
Delivery Date : 25/9/2023
Reporting Date : 30/9/2023
Reporting No. : 08

Dear Gentleman,

Attached here with the delivered on 25 / 9 / 2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signature



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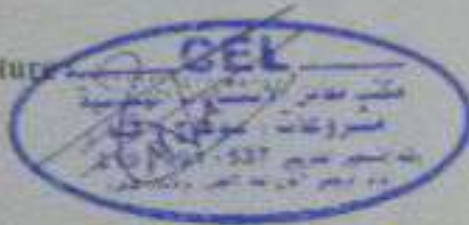
مكتب معامل الاستشارات الهندسية
مشروعات محافظات الوجه القبلي

Company Name : الإيمن
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+040 Zone from 557+960 to 558+260
Type of sample : Original Earth
Delivery Date : 25/9/2023
Reporting Date : 30/9/2023
Reporting No. : 08

RESULTS OF SIEVE ANALYSIS According to ASTM D-422

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100.0
37.5	1.5	94.5
25	1	90.9
19	¾	89.6
12.50	½	86.9
9.50	3/8	85.5
4.75	4	82.3
2.00	10	79.0
0.425	40	65.4

Signature



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مكتب معامل الاستشارات الهندسية

مشاريع معالجة مياه الصرف الصحي

Company Name : الإيجل
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+040 Zone from 557+960 to 558+260
Type of sample : Original Earth
Delivery Date : 25/9/2023
Reporting Date : 30/9/2023
Reporting No. : 08

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	14.5 %

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Company Name : الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+040 Zone from 557+960 to 558+260
Type of sample : Original Earth
Delivery Date : 25/9/2023
Reporting Date : 30/9/2023
Reporting No. : 08

Results of liquid limit and plasticity index
of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

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Company Name : الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+040 Zone from 557+960 to 558+260
Type of sample : Original Earth
Delivery Date : 25/9/2023
Reporting Date : 30/9/2023
Reporting No. : 08

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
• Group Classification	(A-2-4)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No. 10).	79.0	Max 50 %	-----	-----
0.425 mm (No. 40).	65.4	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	14.3	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	NP	-----	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

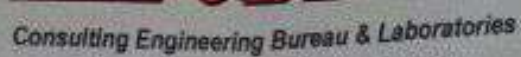
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Company Name : الإيمان مشروعات محافظات الوجه القبلى

Project : Electric Express Train – HSR From Sohag To Qena

Location : St: 558+040 Zone from 557+960 to 558+260

Type of sample : Original Earth

Delivery Date : 25/9/2023

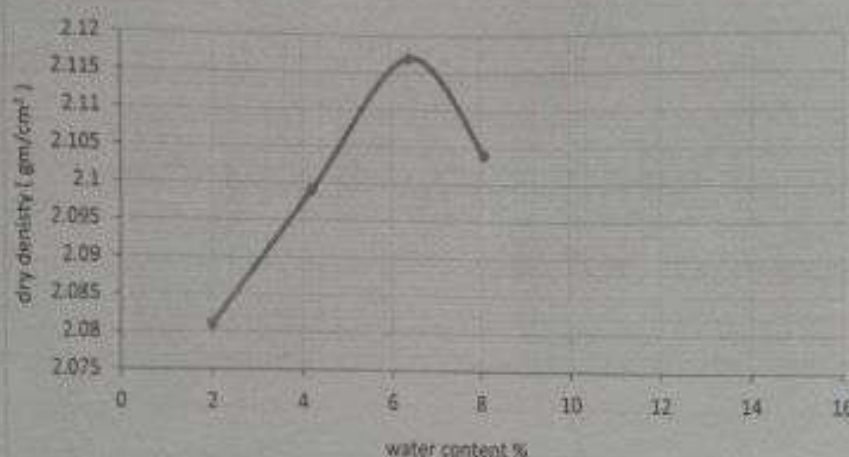
Reporting Date : 30/9/2023

Reporting No. : 08

Moisture – Density relation of soil

Test result (Modified proctor test)

ASTM D-1557



- Max dry density (gm/cm³) : 2.117
- Optimum moisture content % : 6.4 %

Signature _____



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مشروعات محافظات الوجه القبلي

Company Name : الإيما
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+040 Zone from 557+960 to 558+260
Type of sample : Original Earth
Delivery Date : 25/9/2023
Reporting Date : 30/9/2023
Reporting No. : 08

Test Results of California Bearing Ratio on Base Materials

ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.43
1.27	0.050	0.84
1.91	0.075	1.34
2.54	0.100	1.90
3.18	0.125	2.51
3.81	0.150	3.02
4.45	0.175	3.52
5.08	0.200	4.05
6.35	0.250	4.89

CBR Result	Stress (Mpa)		CBR 100 %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	27.6 %
	6.90	1.90	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of $\approx 2.117 \text{ (gm/cm}^3\text{)}$
At = 6.4 % optimum water content.
- 3- Surcharge load 4.50 Kg.
- 4- CBR > 10 for middle and lower embankments according project spec page No 36.

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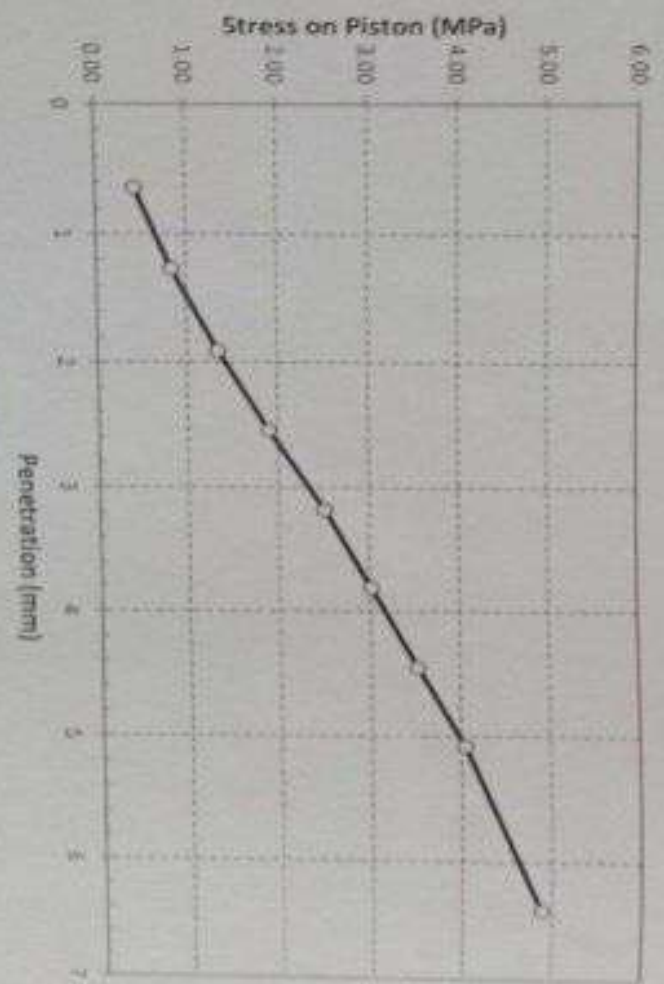


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Company Name : **البحر**
 Project : **Electric Express Train - HSR From Sohag To Qena**
 Location : **St: 558+040 Zone from 557+960 to 558+260**
 Type of sample : **Original Earth**
 Delivery Date : **25/9/2023**
 Reporting Date : **30/9/2023**
 Reporting No. : **08**

Load Penetration Curve of CBR Test

ASTM D-1883



Signature

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مشاريع محافظات الوجه القبلي



Testing date : 28/08/2023
 Company Name : C&A
 Project : Electric Express Train - HSR From Sohaq to Qena
 Station : ST: 528+325 Zone from 528+310 to 528+340
 Level : Original Earth
 S. Description : Borrowholes
 Code : 07
 Sieve Analysis:

Sieve size (IN)	Passing %
2	98.3
1.5	94.3
1	88.5
3/4	84.5
3/8	77.0
4	74.4
10	69.1
40	66.1
200	41.9
	6.6

Test	Results	
Soil Classification	(A-1,b)	
Modified Proctor	Min Dry Density	1.577
	C.M.C	7.29%
L.L	NP	
P.I	NP	
CBR	30.2%	

Notes:.....

Lab (CEL)
 Lab. Engineer
 Signature

Consultant (K.K.)
 Engineer
 Signature

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مكتب معامل الاستشارات الهندسية

Company Name : مشروعات محافظات الوجه القبلى الايمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St:558+325 Zone from 558+310 to 558+340
Type of sample : Original Earth
Delivery Date : 22/08/2023
Reporting Date : 28/08/2023
Reporting No. : 07

Dear Gentleman,

Attached here with the delivered on 22 / 08 / 2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signature



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مكتب معامل الاستشارات الهندسية

Company Name : مشروعات محافظات الوجه القبلي - الايمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St:558+325 Zone from 558+310 to 558+340
Type of sample : Original Earth
Delivery Date : 22/08/2023
Reporting Date : 28/08/2023
Reporting No. : 07

RESULTS OF SIEVE ANALYSIS According to ASTM D-422

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	98.3
37.5	1.5	94.3
25	1	88.5
19	3/4	84.5
12.50	1/2	77.0
9.50	3/8	74.4
4.75	4	69.1
2.00	10	66.1
0.425	40	41.9

Signature



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مشروعات محافظات الوجه القبلي

Company Name : الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St:558+325 Zone from 558+310 to 558+340
Type of sample : Original Earth
Delivery Date : 22/08/2023
Reporting Date : 28/08/2023
Reporting No. : 07

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	6.6%

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مكتب معامل الاستشارات الهندسية

Company Name : مشروعات محافظات الوجه القبلي الأيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St:558+325 Zone from 558+310 to 558+340
Type of sample : Original Earth
Delivery Date : 22/08/2023
Reporting Date : 28/08/2023
Reporting No. : 07

Results of liquid limit and plasticity index
of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

Signature  مكتب معامل الاستشارات الهندسية
مشاريع محافظات الوجه القبلي الأيمان
رقم الترخيص 219 - 991 - 837
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مكتب معامل الاستشارات الهندسية

Company Name : مشروعات محافظات الوجه القبلي الأيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St:558+325 Zone from 558+310 to 558+340
Type of sample : Original Earth
Delivery Date : 22/08/2023
Reporting Date : 28/08/2023
Reporting No. : 07

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
		(A-1-a)	(A-1-b)	(A-2-4)
• Group Classification	(A-1-b)	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	66.1	Max 50 %	-----	-----
0.425 mm (No. 40).	41.9	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	6.8	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	NP	-----	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature



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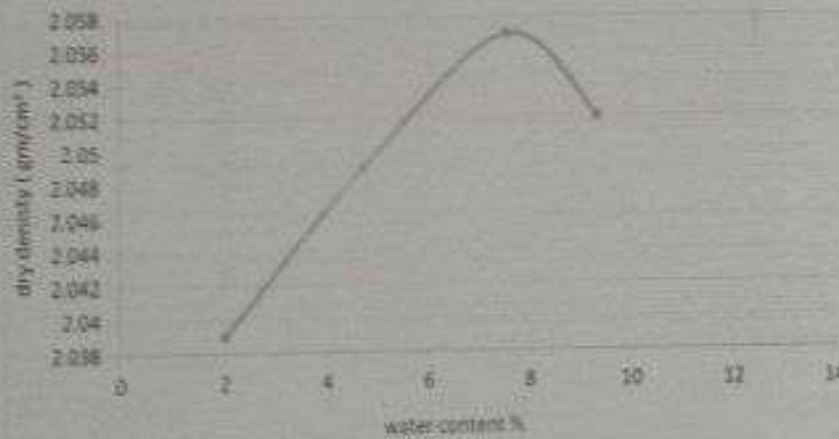


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مكتب معمار الاستشارات الهندسية
مشروعات محافظات الوجه القبلي

Company Name : الأيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St:558+325 Zone from 558+310 to 558+340
Type of sample : Original Earth
Delivery Date : 22/08/2023
Reporting Date : 28/08/2023
Reporting No. : 07

Moisture - Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 2.057
- Optimum moisture content % : 7.5%

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مكتب معامل الاستشارات الهندسية

Company Name : مشروعات محافظات الوجه القبلى الأيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St:558+325 Zone from 558+310 to 558+340
Type of sample : Original Earth
Delivery Date : 22/08/2023
Reporting Date : 28/08/2023
Reporting No. : 07

Test Results of California Bearing Ratio on Base Materials ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.45
1.27	0.050	0.87
1.91	0.075	1.48
2.54	0.100	2.08
3.18	0.125	2.62
3.81	0.150	3.20
4.45	0.175	3.78
5.08	0.200	4.43
6.35	0.250	5.40

CBR Result	Stress (Mpa)		CBR 100 %
At 0.1 inch (2.54 mm) penetration	SL Value	Sample results	30.2%
	6.90	2.08	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of $\approx 2.057 \text{ (gm/cm}^3\text{)}$
At = 7.5 % optimum water content.
- 3- Surcharge load 4.50 Kg.
- 4- CBR ≥ 10 for subgrade and lower embankments according project spec page No.36.

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مكتب معامل الاستشارات الهندسية

مشروعات محافظات الوجه القبلى

Company Name : الايمان

Project : Electric Express Train - HSR From Sohag To Qena

Location : St:558+325 Zone from 558+310 to 558+340

Type of sample : Original Earth

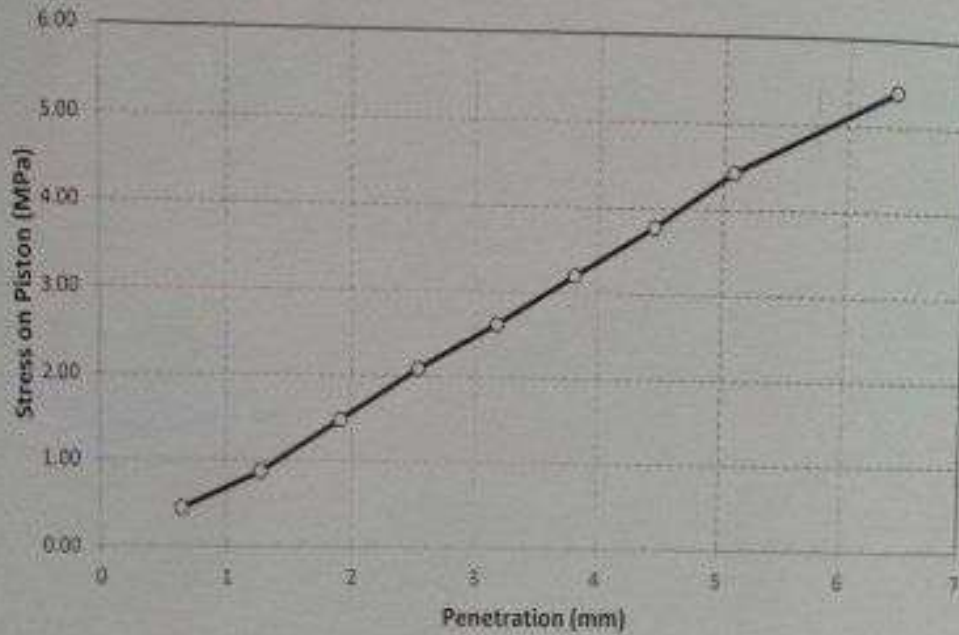
Delivery Date : 22/08/2023

Reporting Date : 28/08/2023

Reporting No. : 07

Load Penetration Curve of CBR Test

ASTM D-1883



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Testing date : 22/6/2023
 Company Name : شركة الإيمان
 Project : Electric Express Train – HSR From Sohag to Qena
 Station : ST: 558+480 Zone from 558+340 to 558+500
 Level : Original Earth
 S. Description : Replacement Excavation (-0.5)
 Code : 06
 Sieve Analysis:

Sieve size (IN)	Passing %
2	100
1.5	99.5
1	97.3
3/4	94.2
3/8	91.5
3/8	90.5
4	88.5
10	86.6
40	74.7
200	7.3

Test	Results
Soil Classification	A-3
Modified Proctor	Max Dry Density 1.851
	O.M.C. 7%
L _c L _v	NP
P.I	NP
CBR	23-3%

Notes:.....

Lab (CEL)

Lab. Engineer / 
 Signature / 
 2023-06-22

Consultant (K.K.)

Engineer / 
 Signature / 

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مشروعات محافظات الوجه القبلى

Company Name : شركة الإيمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+480 Zone from 558+340 to 558+500
Type of sample : Original Earth
Delivery Date : 15/6/2023
Reporting Date : 22/6/2023
Reporting No. : 06

Dear Gentleman,

Attached here with the delivered on 15 / 6 / 2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken.



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Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+480 Zone from 558+340 to 558+500
Type of sample : Original Earth
Delivery Date : 15/6/2023
Reporting Date : 22/6/2023
Reporting No. : 06

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100
37.5	1.5	99.5
25	1	97.3
19	3/4	94.2
12.50	1/2	91.5
9.50	3/8	90.5
4.75	4	88.5
2.00	10	86.6
0.425	40	74.7

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مشروعات محافظات الوجه القبلي
Signature: [Signature]
Date: 22/6/2023

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Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+480 Zone from 558+340 to 558+500
Type of sample : Original Earth
Delivery Date : 15/6/2023
Reporting Date : 22/6/2023
Reporting No. : 06

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	7.3

Signature: 
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مسرعات محافظات الوجه القبلي

Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+480 Zone from 558+340 to 558+500
Type of sample : Original Earth
Delivery Date : 15/6/2023
Reporting Date : 22/6/2023
Reporting No. : 66

Results of liquid limit and plasticity index
of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

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Company Name : شركة الإيمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+480 Zone from 558+340 to 558+500
Type of sample : Original Earth
Delivery Date : 15/6/2023
Reporting Date : 22/6/2023
Reporting No. : 06

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
• Group Classification	A-3	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	86.6	Max 50 %	-----	-----
0.425 mm (No. 40).	74.7	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	7.3	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	NP	-----	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %	Max 10 %

The test results (☒ Comply ☐ Not Comply) with specifications limits

Signature

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مشروعات محافظات الوجه القبلي
د. محمد محمد محمد
2023/06/22

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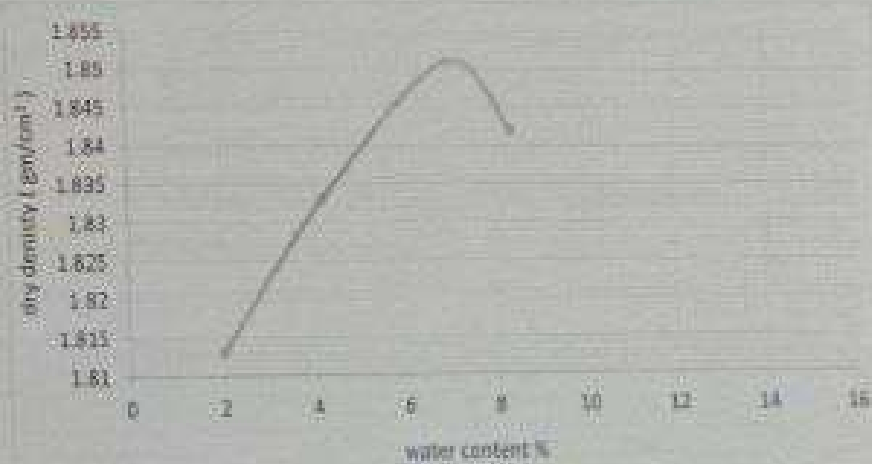
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Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+480 Zone from 558+340 to 558+500
Type of sample : Original Earth
Delivery Date : 15/6/2023
Reporting Date : 22/6/2023
Reporting No. : 06

Moisture - Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 1.851
- Optimum moisture content (%) : 7%

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Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+480 Zone from 558+340 to 558+500
Type of sample : Original Earth
Delivery Date : 15/6/2023
Reporting Date : 22/6/2023
Reporting No. : 06

Test Results of California Bearing Ratio on Base Materials
ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.20
1.27	0.050	0.60
1.91	0.075	1.06
2.54	0.100	1.62
3.18	0.125	2.13
3.81	0.150	2.63
4.45	0.175	3.09
5.08	0.200	3.60
6.35	0.250	4.55

CBR Result	Stress (Mpa)		CBR 100 %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	23.5%
	6.90	1.62	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of $\approx 1.851(\text{gm}/\text{cm}^3)$
At = 7 % optimum water content.
- 3- Strength test at 50 Kg

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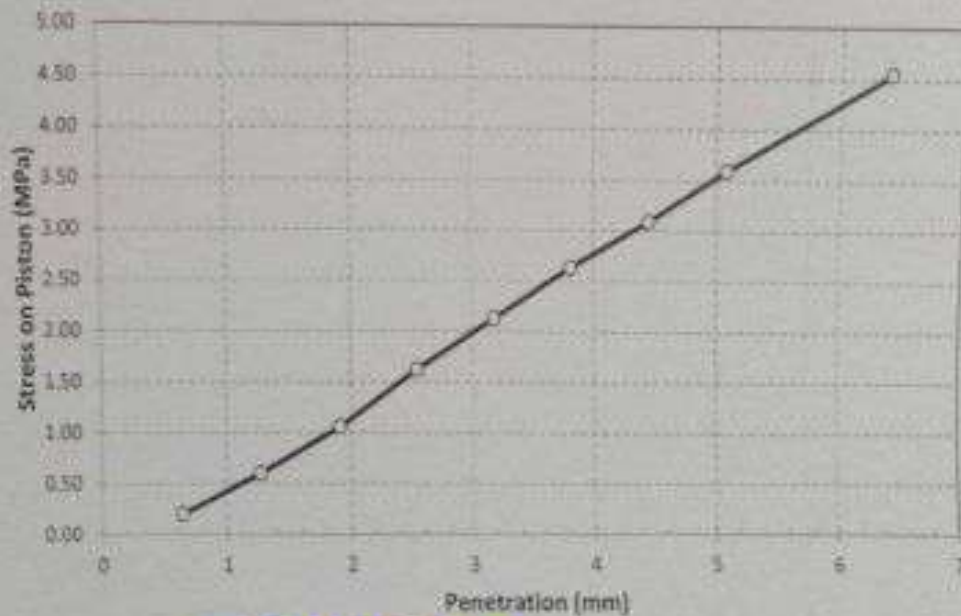
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مشروعات محافظات الوجه القبلي

Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+480 Zone from 558+340 to 558+500
Type of sample : Original Earth
Delivery Date : 15/6/2023
Reporting Date : 22/6/2023
Reporting No. : 06

Load Penetration Curve of CBR Test

ASTM D-1883



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Testing date : 3/6/2023
 Company Name : شركة الإيصال
 Project : Electric Express Train - HSR From Sohag to Qena
 Station : ST: 558+540 Zone from 558+500 to 558+560
 Level : Original Earth
 S. Description : Boreholes
 Code : 05
 Sieve Analysis:

Sieve size (IN)	Passing %
2	100
1.5	96.3
1	92.9
¾	90.4
½	87.1
3/8	85.8
4	80.5
10	70.1
40	52.8
200	6.3

Test	Results	
Soil Classification	A-3	
Modified Proctor	Max Dry Density	1.97
	O.M.C	8.1%
L.L	NP	
P.I	NP	
CBR	13.7%	

Notes:

Lab (CEL)

Lab (CEL)

Signature

Consultant (K.K.)

Engineer

Signature

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مكتب معامل الاستشارات الهندسية

مشروعات محافظات الوجه القبلي

Company Name : شركة الايمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+540 Zone from 558+500 to 558+560
Type of sample : Original Earth
Delivery Date : 25/5/2023
Reporting Date : 3/6/2023
Reporting No. : 05

Dear Gentleman,

Attached here with the delivered on 25 / 5 / 2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

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مشروعات محافظات الوجه القبلي

Company Name : شركة الإيمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+540 Zone from 558+500 to 558+560
Type of sample : Original Earth
Delivery Date : 25/5/2023
Reporting Date : 3/6/2023
Reporting No. : 05

RESULTS OF SIEVE ANALYSIS According to ASTM D-422.

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100
37.5	1.5	96.3
25	1	92.9
19	¾	90.4
12.50	½	87.1
9.50	3/8	85.8
4.75	4	80.5
2.00	10	70.1
0.425	40	52.8

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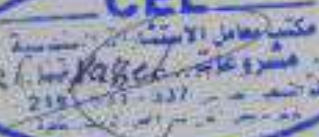
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مكتب معامل الاستشارات الهندسية
مشاريع ومعايير الجودة القبلية

Company Name : شركة الإيمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+540 Zone from 558+500 to 558+560
Type of sample : Original Earth
Delivery Date : 25/5/2023
Reporting Date : 3/6/2023
Reporting No. : 05

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	6.3

Signature: 
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مكتب معامل الاستشارات الهندسية
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مكتب معامل الاستشارات الهندسية
مشروعات محافظات الوجه القبلي

Company Name : شركة الإيمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+540 Zone from 558+500 to 558+560
Type of sample : Original Earth
Delivery Date : 25/5/2023
Reporting Date : 3/6/2023
Reporting No. : 05

Results of liquid limit and plasticity index
of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

Signature: 

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Testing Laboratory

3 في الملك الأفديل
الزمالك - القاهرة
تليفون - فاكس : ٢٧٣٦٧٢٣١ - ٢٧٣٦٣٠٩٣
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Consulting Engineering Bureau & Laboratories

مكتب معامل الاستشارات الهندسية

مشروعات محافظات الوجه القبلي

Company Name : شركة الإيمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+540 Zone from 558+500 to 558+560
Type of sample : Original Earth
Delivery Date : 25/5/2023
Reporting Date : 3/6/2023
Reporting No. : 05

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
• Group Classification	A-3	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No. 10).	70.1	Max 50 %	-----	-----
0.425 mm (No. 40).	52.8	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	6.3	Max 15 %	Max 15 %	Max 15 %
Liquid Limit		-----	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %	Max 10 %

The test result ☒ Comply - ☐ Not Comply) with specifications limits.

Signature

مكتب معامل الاستشارات الهندسية
مشروعات محافظات الوجه القبلي
د. محمد عبد الحليم
رئيس المكتب

3 El Malek El Afdal Street
Zamalek, Cairo.
Tel.& Fax : 27367231 - 27363093



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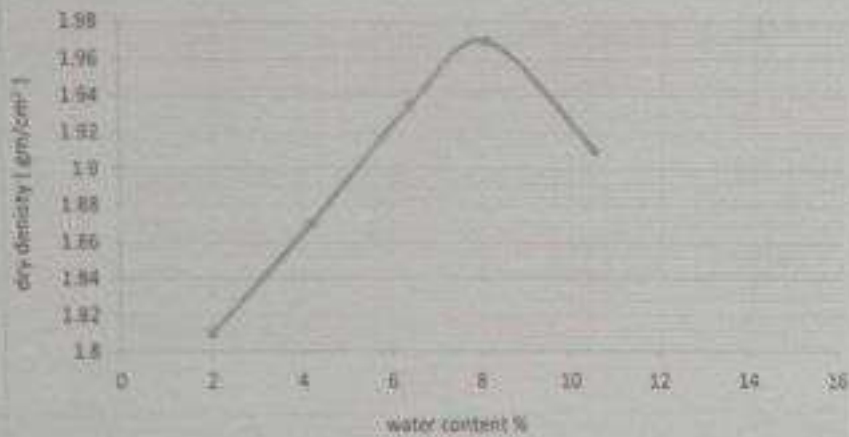
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مكتب معامل الاستشارات الهندسية
مشروعات محافظات الوجه القبلي

Company Name : شركة الإيمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+540 Zone from 558+500 to 558+560
Type of sample : Original Earth
Delivery Date : 25/5/2023
Reporting Date : 3/6/2023
Reporting No. : 05

Moisture – Density relation of soil
Test result (Modified proctor test)
ASTM D-1557



- Max dry density (gm/cm³) : 1.97
- Optimum moisture content % : 8.1 %

Signature



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Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+540 Zone from 558+500 to 558+560
Type of sample : Original Earth
Delivery Date : 25/5/2023
Reporting Date : 3/6/2023
Reporting No. : 05

Test Results of California Bearing Ratio on Base Materials

ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.28
1.27	0.050	0.49
1.91	0.075	0.71
2.54	0.100	0.95
3.18	0.125	1.23
3.81	0.150	1.44
4.45	0.175	1.50
5.08	0.200	1.37
6.35	0.250	1.01

CBR Result	Stress (Mpa)		CBR 100 %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	13.7 %
	6.90	0.95	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of $\approx 1.97 \text{ (gm/cm}^3\text{)}$
At = 8.1 % optimum water content.
- 3- Sample size: 150 mm $\times$ 150 mm $\times$ 150 mm.
- 4- CBR > 10 for evidence of lower embankments according project spec page No 35.

Signature

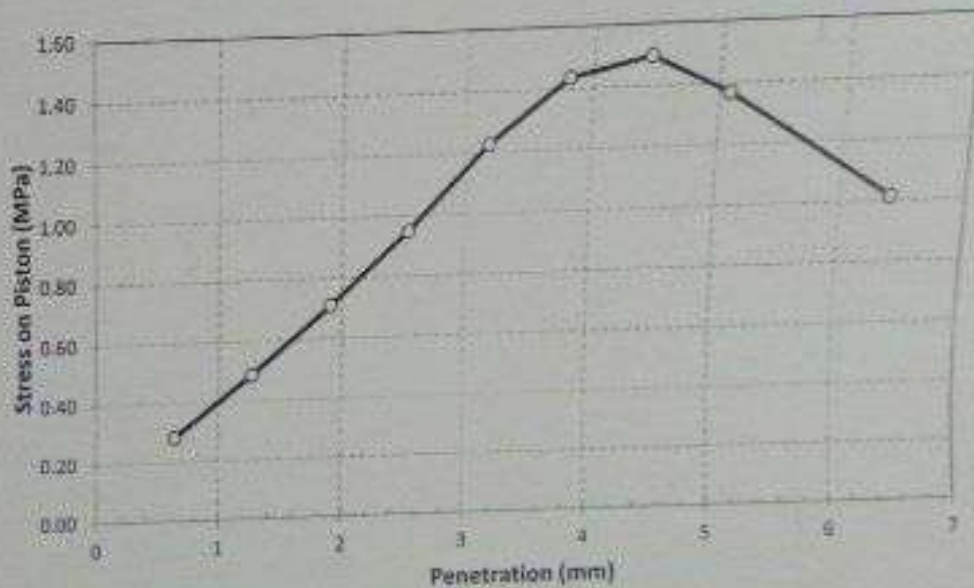
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Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+540 Zone from 558+500 to 558+560
Type of sample : Original Earth
Delivery Date : 25/5/2023
Reporting Date : 3/6/2023
Reporting No. : 05

Load Penetration Curve of CBR Test
ASTM D-1883



Signature: 
مكتب معامل الاستشارات الهندسية
مشروعات محافظات الوجه القبلي
رقم الترخيص: 215 - 891 - 537
طريق مصر - القاهرة - 3 كم



Testing date : 26/5/2023
 Company Name : شركة الإنشائات
 Project : Electric Express Train - HSR From Sohag to Qena
 Station : ST: 558+400 Zone from 558+340 to 558+500
 Level : Ferma
 S. Description : Confirm the Validity of Ferma Layer after cutting (Original Earth)
 Code : 104
 Sieve Analysis:

Sieve size (IN)	Passing %
2	100
1.5	98.7
1	96.9
¾	96.4
½	95.9
3/8	95.6
4	95.2
10	94.4
40	82.6
200	7.0

Test	Results	
Soil Classification	A-3	
Modified Proctor	Max Dry Density	1.00
	OMC	8.7%
	I, L	NP
P.I	NP	
CBR	17%	

Notes:



Consultant (K.K.)
 Engineer :
 Signature :

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مكتب معامل الاستشارات الهندسية

مشاريع ومعامل المختبرات الوجه القبلي

Company Name : شركة الإسمان

Project : Electric Express Train – HSR From Sohag To Qena

Location : St: 558+400 Zone from 558+340 to 558+500

Type of sample : Confirm the Validity of Fenna Layer after cutting (Original Earth)

Delivery Date : 20/5/2023

Reporting Date : 26/5/2023

Reporting No. : 04

Dear Gentleman,

Attached here with the delivered on 20 / 5 / 2023

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140
3. Liquid limits and plasticity index of soil according to ASTM D-4318
4. Soil classification according to Project Specs.
5. Proctor Test according to ASTM D-1557
6. CBR according to ASTM D-1883

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken



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مكتب معامل الاستشارات الهندسية
مشروعات محافظات الوجه القبلي

Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+400 Zone from 558+340 to 558+500
Type of sample : Confirm the Validity of Ferma Layer after cutting (Original Earth)
Delivery Date : 20/5/2023
Reporting Date : 26/5/2023
Reporting No. : 04

RESULTS OF SIEVE ANALYSIS According to ASTM D-422

Sieve Size (mm)	Sieve Size (IN)	Passing %
50	2	100
37.5	1.5	98.7
25	1	96.9
19	3/4	96.4
12.50	1/2	95.9
9.50	3/8	95.6
4.75	4	94.2
2.00	10	94.4
0.425	40	82.6

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مشروعات محافظات الوجه القبلي
Signature: [Signature]
Date: 26/5/2023

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الممسوحة ضوئياً بـ CamScanner

الممسوحة ضوئياً بـ CamScanner

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مكتب معامل الاستشارات الهندسية

مشروعات محافظات الوجه القبلي

Company Name : شركة الإيمان
Project : Electric Express Train - HSR From Sohag To Qena
Location : St: 558+400 Zone from 558+340 to 558+500
Type of sample : Confirm the Validity of Ferma Layer after cutting (Original Earth)
Delivery Date : 20/5/2023
Reporting Date : 26/5/2023
Reporting No. : 04

Materials finer than 75 μ m (no.200) sieve
By washing ASTM D-1140.

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	7

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مشروعات محافظات الوجه القبلي

Company Name : شركة الإيمان
Project : Electric Express Train – HSR From Sohag To Qena
Location : St: 558+400 Zone from 558+340 to 558+500
Type of sample : Confirm the Validity of Ferma Layer after cutting (Original Earth)
Delivery Date : 20/5/2023
Reporting Date : 26/5/2023
Reporting No. : 04

Results of liquid limit and plasticity index
of soils according to ASTM D-4318

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

Signature 

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مشروعات معاينات الوجه القبلي

Company Name : شركة الإيمان
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Type of sample : Confirm the Validity of Ferma Layer after cutting (Original Earth)
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Reporting Date : 26/5/2023
Reporting No. : 04

Soil Classification

TEST	Results (%)	Limits according Projects Specs		
• Group Classification	A3	(A-1-a)	(A-1-b)	(A-2-4)
2.00 mm (No.10).	94.4	Max 50 %	-----	-----
0.425 mm (No. 40).	82.6	Max 30 %	Max 50 %	-----
0.075 mm (No. 200).	7	Max 15 %	Max 15 %	Max 15 %
Liquid Limit	NP	-----	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %	Max 10 %

The test results are (☐ Comply - ☐ Not Comply) with specifications limits

Signature



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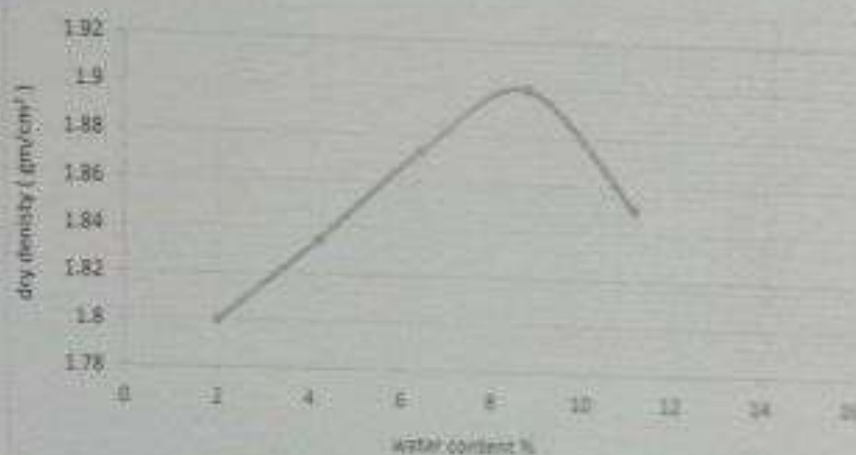
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هاتف - فاكس : 27367231 - 27363093
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Company Name : شركة الإيمان
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Delivery Date : 20/5/2023
Reporting Date : 26/5/2023
Reporting No. : 04

Moisture – Density relation of soil

Test result (Modified proctor test)

ASTM D-1557



- Max dry density (gm/cm³) : 1.90
- Optimum moisture content % : 8.7%

Signature _____



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Journal of Management Inquiry 20(4)

الرجوع إلى صفحة 1

المطبخ : 1000 - 1000000

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مشروعات محافظات الوجه القبلي

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Test Results of California Bearing Ratio on Base Materials ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	0.18
1.27	0.050	0.48
1.91	0.075	0.83
2.54	0.100	1.17
3.18	0.125	1.62
3.81	0.150	1.93
4.45	0.175	1.98
5.08	0.200	1.83
6.35	0.250	1.42

CBR Result	Stress (Mpa)		CBR 100 %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	17 %
	6.90	1.17	

Notes:

- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of $\rho = 1.90 \text{ (gm/ccm}^3\text{)}$
At = 8.7 % optimum water content.
- 3- So change CBR to 17 %

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219-557-537
219-557-537

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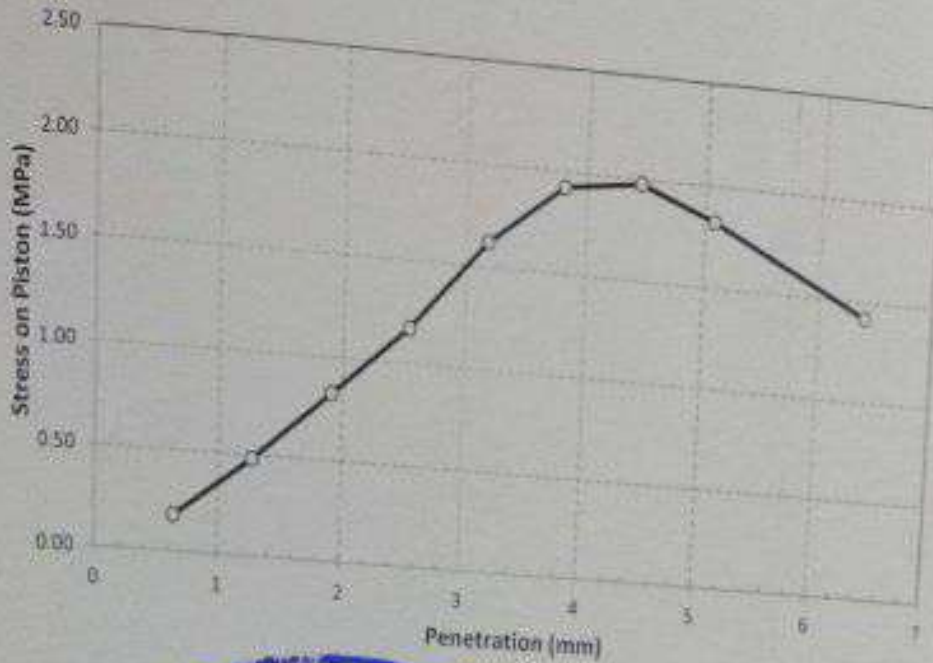
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Load Penetration Curve of CBR Test ASTM D-1883



Signature



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City	State	Year	Population	Area	Population Density
Albany	NY	1990	20,000	100	200
Albany	NY	2000	22,000	100	220
Albany	NY	2010	24,000	100	240
Albany	NY	2020	26,000	100	260
Albany	NY	2030	28,000	100	280
Albany	NY	2040	30,000	100	300
Albany	NY	2050	32,000	100	320
Albany	NY	2060	34,000	100	340
Albany	NY	2070	36,000	100	360
Albany	NY	2080	38,000	100	380
Albany	NY	2090	40,000	100	400
Albany	NY	2100	42,000	100	420
Albany	NY	2110	44,000	100	440
Albany	NY	2120	46,000	100	460
Albany	NY	2130	48,000	100	480
Albany	NY	2140	50,000	100	500
Albany	NY	2150	52,000	100	520
Albany	NY	2160	54,000	100	540
Albany	NY	2170	56,000	100	560
Albany	NY	2180	58,000	100	580
Albany	NY	2190	60,000	100	600
Albany	NY	2200	62,000	100	620
Albany	NY	2210	64,000	100	640
Albany	NY	2220	66,000	100	660
Albany	NY	2230	68,000	100	680
Albany	NY	2240	70,000	100	700
Albany	NY	2250	72,000	100	720
Albany	NY	2260	74,000	100	740
Albany	NY	2270	76,000	100	760
Albany	NY	2280	78,000	100	780
Albany	NY	2290	80,000	100	800
Albany	NY	2300	82,000	100	820
Albany	NY	2310	84,000	100	840
Albany	NY	2320	86,000	100	860
Albany	NY	2330	88,000	100	880
Albany	NY	2340	90,000	100	900
Albany	NY	2350	92,000	100	920
Albany	NY	2360	94,000	100	940
Albany	NY	2370	96,000	100	960
Albany	NY	2380	98,000	100	980
Albany	NY	2390	100,000	100	1000
Albany	NY	2400	102,000	100	1020
Albany	NY	2410	104,000	100	1040
Albany	NY	2420	106,000	100	1060
Albany	NY	2430	108,000	100	1080
Albany	NY	2440	110,000	100	1100
Albany	NY	2450	112,000	100	1120
Albany	NY	2460	114,000	100	1140
Albany	NY	2470	116,000	100	1160
Albany	NY	2480	118,000	100	1180
Albany	NY	2490	120,000	100	1200
Albany	NY	2500	122,000	100	1220
Albany	NY	2510	124,000	100	1240
Albany	NY	2520	126,000	100	1260
Albany	NY	2530	128,000	100	1280
Albany	NY	2540	130,000	100	1300
Albany	NY	2550	132,000	100	1320
Albany	NY	2560	134,000	100	1340
Albany	NY	2570	136,000	100	1360
Albany	NY	2580	138,000	100	1380
Albany	NY	2590	140,000	100	1400
Albany	NY	2600	142,000	100	1420
Albany	NY	2610	144,000	100	1440
Albany	NY				

01 to 53	Eq 3000 Series
Depot Reference	For Kilometer point only Start Km is used
Work Activity	
Sub Element of Activity	

Soil (A-1-b)	
558+880	
Test result attachment	Remarks
According to specifications	
7.3	
N.P.	
6.4	
2.20	
44.10	
Comments by:	
مراجعة المهندس محمد عبد الله 28-5-2013	

APPROVAL STATUS		
Sgn	Date	A-AWCR
<i>[Signature]</i>	28-6-2022	A

- **Consistent**
- **Alignment/Proximity:** Endpoints only

MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	K.K																
Issued by Contractor	Name	Sign	Date	9-4-2023																
Contractor Reference	EM-S-1		Time																	
Received by ER			MAR	<table border="1"> <tr> <td>CI</td> <td>D2</td> <td>C3</td> <td>D0</td> <td>MA</td> <td>VR</td> <td>HS</td> <td>MA</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	CI	D2	C3	D0	MA	VR	HS	MA								
CI	D2	C3	D0	MA	VR	HS	MA													

CODE-1	S1 to S21	D1 to S3	By KCC Note
CODE-2	Station Reference	Depot Reference	For Kilometer public only, Short Km is used
CODE-3	Work Activity		Sub Element of Activity

Description of Materials	Soil (A-1-b)		
Location to be Used	558+800		
Item	Specification	Test requirement	Test result attachment
1	ASTM C 136	Sieve Analysis	According to specifications
2	ASTM D 1140	Passing Sieve, No 200	7.2
3	ASTM D 4318	Atterberg limit	N.P
4	ASTM D 2974	Moisture content	6.4
5	ASTM D 1557	Modified proctor	2.247
6	ASTM D 1883	CBR	30.10
Comments by:		Comments by:	
		تم التأكد من صلاحية قوتها تحت محاكي القياس 9-4-2023	

APPROVAL STATUS			
Organisation	Name	Sign	Date
Contractor			
QA/QC*			9-4-2023
GARB**			
Employers Representative			
A-AWC-R			

* Designer
** Approval/Endorsement Only

MATERIAL INSPECTION REQUEST



Contractor Company	الريمان		Designer Company	K.K
Issued by Contractor	Name	Sign	Date	9-4-2022
Contractor Reference	EM-S-1		Time	
Received by ER			MIN	

CODE-1	SL to SC1	DS to JS	SP, XSB, Bure
CODE-2	Station Reference	Output Reference	For Routinized print only. Must be in text.
CODE-3	Work Activity		
Sub-division of Activity			

REPLACEMENT FILL MATERIAL RESULTS

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				Code
	Quantity	Level	From	To	
Location to be Used	854.8	2-	559+020	559+260	EM-ME-01-02
	219.6	2-	550+600	558+680	EM-ME-02
	6.8	2.5-	558+980	559+000	EM-ME-03
	414	1.75-	558+600	558+680	EM-ME-04-02
	1794	1.75-	559+020	559+280	EM-ME-05-02
	537	1.5-	558+600	558+680	EM-ME-06-02
	771.94	1.5-	559+200	559+310	EM-ME-07-02
Total (m3)					4598.14

Item	Description	Unit	Quantity	Actual Date	Note
1	L.L.B.P.L.B.O.M.C %	M3	5000	04-04-2023	
2	Proctor	M3	5000	04-04-2023	
3	Classification	M3	5000	04-04-2023	
4	Sieve Analysis	M3	5000	04-04-2023	
5	C.B.R	M3	5000	04-04-2023	

Comments by:

(Signature and Stamp of Engineer)

9-4-2023

APPROVAL STATUS

Organisation	Name	Sign	Date	AAWC/I
Contractor				
QA/QC *			9-4-2022	A
GARB **				
Employers Representative				

* Designer
** Engineer / Engineer (Client Only)

MATERIAL INSPECTION REQUEST



Contractor Company	الإيمان		Designer Company	K.K
Issued by	Name	Sign	Date	28-5-2023
Contractor				
Contractor Reference	EM-S-2			
Received by			MIR	
ER				

CODE-1	IS to SCL	IS to IS	IS to IS
CODE-2	Superior Reference	Superior Reference	Superior Reference
CODE-3		Field Activity	Field Activity

REPLACEMENT FILL MATERIAL RESULTS

Description of Material	Quantity	Level	From	To	Code
65.2.5	1.25		\$58+800	\$58+700	EM-LIM-01-02
613.5	1.25		\$58+000	\$58+150	EM-LIM-04
263	1.25		\$58+700	\$58+740	EM-LIM-13
263.5	1.25		\$58+780	\$58+840	EM-LIM-14
63.38	1-		\$58+540		EM-LIM-15
25.6	1.25		\$58+860		EM-LIM-16
261.93	1.5-		\$58+900	\$58+980	EM-LIM-21
170.88	0.5-		\$58+220	\$58+310	EM-LIM-17
191.50	1.25		\$58+960	\$58+020	EM-LIM-18
702.72	0.5-		\$58+040	\$58+220	EM-LIM-19
391.50	1.25-		\$58+900	\$58+960	EM-LIM-21
507	1-		\$58+980	\$58+040	EM-LIM-22
Total (m3)					NOTE
4827.01					

Item	Description	Unit	Quantity	Arrival Date	Comments by:
1	L.L & P.L & O.M.C %	M3	5000	23-05-2023	
2	Proctor	M3	5000	23-05-2023	
3	Classification	M3	5000	23-05-2023	
4	Sieve Analysis	M3	5000	28-05-2023	
5	C.S.R	M3	5000		

Organisation	Name	Sign	Date	Approval Status
Contractor			28-5-2023	Awaiting
QA/QC *				
SARB **				
Employer's Representative				

MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	K.K
Issued by Contractor	Name	Sign	Date	Time
			21-7-2023	
Contractor Reference	EM-S-3			
Received by ER			MAR	

CODE-1	S1 to S21 Station Reference	D1 to D3 Depot Reference	Kg XXX Note for Kilometer point only Start km is used
CODE-2	Work Activity		
CODE-3	Sub Element of Activity		

Description of Materials	Soil (A-1-b)			
Location to be Used	558+800			
Item	Specification	Test requirement	Test result attachment	Remarks
1	ASTM C 136	Sieve Analysis	According to specifications	
2	ASTM D 1140	Passing Sieve, No 200	9.7	
3	ASTM D 4318	Atterberg limit	N.P	
4	ASTM D 2974	Moisture content	5.9	
5	ASTM D 1557	Modified proctor	2.152	
6	ASTM D 1883	CBR	40.30	
Comments by:		Comments by:		
		تم اعتماد حصى من نوع 55000 21-7-2023		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWCR
Contractor				
QA/QC*			21-7-2023	A
GARB**				
Employers Representative				

* Designer
** Alignment/Bridges/ Culvert only

MATERIAL INSPECTION REQUEST



Contractor Company	الإيمان		Designer Company	K.K
Issued by Contractor	Name	Sign	Date	Time
			21-7-2023	
Contractor Reference	EM-S-3			
Received by ER			MIR	

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

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
	Quantity	Level	From	To	Code
Location to be Used	1208.25	1.5-	558+600	558+700	EM-ME-08-02
	1054.02	2-	558+940	559+020	EM-ME-09
	24.18	2.5-	558+920	558+940	EM-ME-10
	750.38	1.5-	559+200	559+310	EM-UM-02-02
	483	1.75-	558+940	559+020	EM-ME-11-02
	229.76	2-	558+920	558+940	EM-ME-12
	261	1.25-	559+160	559+200	EM-UM-03
	728.81	1-	559+200	559+310	EM-UM-05
	4739.4	Total (m3)			

Item	Description	Unit	Quantity	Arrival Date	Note
1	L.L & P.L & O.M.C %	M3	5000	16-07-2023	
2	Proctor	M3	5000	16-07-2023	
3	Classification	M3	5000	16-07-2023	
4	Sieve Analysis	M3	5000	16-07-2023	
5	C.B.R	M3	5000	21-07-2023	

Comments by: تم اعتماد ملاحظة مقبولة على حوالى 5000m3

21-7-2023

APPROVAL STATUS			
Organisation	Name	Sign	Date
Contractor			
QA/QC *			
GARB **			
Employers Representative			

MATERIAL APPROVAL REQUEST



Ministry of Transport and Public Works



Contractor Company	الإيمان		Designer Company	K.K.
Issued by Contractor	Name	Sign	Date	Time
			22/07/2023	
Contractor Reference	EM-S-4			
Received by ER			MAR	

CODE 1	S1 to E21 Station Reference	D1 to S3 Depot Reference	Ko-XXX Name For Kilometer post only Start Km is used
CODE 2	Work Activity		
CODE 3	Sub Element of Activity		

Description of Materials	Soil (A-1-b)			
Location to be Used	558+800 (Right)			
Item	specification	Test requirement	Test result attachment	Remarks
1	ASTM C 136	Sieve Analysis	According to specifications	
2	ASTM D 1140	Passing Sieve, No 200	10.5	
3	ASTM D 4318	Atterberg limit	N.P	
4	ASTM D 2974	Moisture content	6.3	
5	ASTM D 1557	Modified proctor	2.258	
6	ASTM D 1883	CBR	43	
Comments by:		Comments by:		
		تم اعتماد مادة مشونة بترية قبل حوائج جودتها 22-7-2023		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-B
Contractor				
QA/QC *			22-7-2023	A
GARS **				
Employers Representative				

* Designer

** Alignment/Bridges: Civilian only

MATERIAL INSPECTION REQUEST



Contractor Company	الإيمان		Designer Company	K.K																
Issued by Contractor	Name	Sign	Date	Time																
Contractor Reference	EM-S-4		22-7-2023																	
Received by ER			MIR	<table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>D0</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	C1	C2	C3	D0	MM	YY	HH	MM								
C1	C2	C3	D0	MM	YY	HH	MM													
CODE-1	S1 to S21 Station Reference		D1 to S3 Depot Reference	Fig XXXX Note For Kilometer point only Start Km is used																
CODE-2	Work Activity																			
CODE-3	Sub Element of Activity																			

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
	Quantity	Level	From	To	Code
Location to be Used	633.75	1-	558+600	558+700	EM-UM-06
	5.74	2-	558+740		EM-ME-13
	5.74	2-	558+780		EM-ME-14
	125.86	1.75-	558+720	558+740	EM-ME-15
	96.1	1.75-	558+780	558+800	EM-ME-16
	1140.75	1-	559+040	559+220	EM-UM-07
	276	1.75-	558+920	558+960	EM-ME-17
	402.75	1.5-	558+960	559+020	EM-ME-18
	241.65	1.5-	558+700	558+740	EM-ME-19
	216.38	1.5-	558+780	558+800	EM-ME-20
	421.43	0.75-	558+600	558+700	EM-UM-08
	337.14	0.75-	559+220	559+310	EM-UM-09
	43.53	1.25-	558+540		EM-UM-10
	803.20	0.75-	559+040	559+220	EM-UM-11
	4750.02	Total (m3)			

Item	Description	Unit	Quantity	Arrival Date	Note
1	LL & P.L & O.M.C %	M3	5000	18-07-2023	
2	Proctor	M3	5000	18-07-2023	
3	Classification	M3	5000	18-07-2023	
4	Sieve Analysis	M3	5000	18-07-2023	
5	C.B.R	M3	5000	22-07-2023	

Comments by:

Comments by:

APPROVAL STATUS

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

MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	K.K																		
Issued by Contractor	Name	Sign	Date	Time																		
			24/08/2023																			
Contractor Reference	EM-S-5																					
Received by ER			MAR	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	1	2	3	4	5	6	7	8	9									
1	2	3	4	5	6	7	8	9														

CODE - 1	S1 to S21 Station Reference	D1 to D3 Depot Reference	Eg XXX None For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	Soil (A-1-b)			
Location to be Used	558+800 (Right)			
Item	specification	Test requirement	Test result attachment	Remarks
1	ASTM C 136	Sieve Analysis	According to specifications	
2	ASTM D 1140	Passing Sieve, No 200	8	
3	ASTM D 4318	Atterberg limit	N.P	
4	ASTM D 2974	Moisture content	6.4	
5	ASTM D 1557	Modified proctor	2,268	
6	ASTM D 1883	CBR	43.1	
Comments by:		Comments by:		
		تم اعتماد صلاحية مشورتي تدرية عملي حوالي 3 م 24-8-2023		

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor				
QA/QC*			24-8-2023	A
GARB**				
Employers Representative				

* Designer
** Alignment/Bridges/ Culvert only

MATERIAL
INSPECTION
REQUEST

Contractor Company	الإيمان		Designer Company	K.K
Issued by Contractor	Name	Sign	Date	Time
Contractor Reference	EM-S-5		24-8-2023	
Received by ER			MIR	
CODE - 1	S1 to S23	D1 to S1	Kp XXX Note	
CODE - 2	Station Reference	Depot Reference	For Kilometer point only Station Not to used	
CODE - 3	Work Activity			
	Sub Element of Activity			

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
	Quantity	Level	From	To	Code
Location to be Used	281.93	1.5-	558+900	558+960	EM-ME-21
	253.50	1-	558+700	558+740	EM-UM-23
	253.50	1-	558+780	558+820	EM-UM-24
	44.62	0.75-	558+540		EM-UM-25
	439.20	0.5-	558+600	558+700	EM-UM-26
	777.28	0.25-	559+040	559+220	EM-UM-27
	435.42	0.25-	559+220	559+310	EM-UM-28
	703.25	1-	558+840	558+960	EM-UM-29
	359.57	0.75-	558+960	559+040	EM-UM-30
	179.78	0.75-	558+700	558+740	EM-UM-31
	269.68	0.75-	558+780	558+820	EM-UM-32
	624.71	0.75-	558+960	558+820	EM-UM-33
	4622.44	Total (m3)			

Item	Description	Unit	Quantity	Arrival Date	Note
1	LL & P.I. & D.M.C %	M3	5000	19-08-2023	
2	Proctor	M3	5000	19-08-2023	
3	Classification	M3	5000	19-08-2023	
4	Sieve Analysis	M3	5000	19-08-2023	
5	C.B.R	M3	5000	24-08-2023	

Comments by:

Comments by:

تم اكمال الاختبار فتمت الموافقة على حوائط الممر

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				
QA/QC *	م. الزهراني	م. الزهراني	24-8-2023	A
GARB **				
Employers Representative				

* Designer

** Mangers / Bridges / Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	K.K																
Issued by Contractor	Name	Sign	Date	Time																
			11/10/2023																	
Contractor Reference	EM-S-6																			
Received by EIT			MAR	<table border="1"> <tr> <td>CE</td> <td>CE</td> <td>CE</td> <td>CE</td> <td>CE</td> <td>CE</td> <td>CE</td> <td>CE</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	CE	CE	CE	CE	CE	CE	CE	CE								
CE	CE	CE	CE	CE	CE	CE	CE													

CODE - 1	S1 to S21 Station Reference	D1 to D3 Depot Reference	eg 2008 Note For Kilometer post only Start km is used
CODE - 2		Work Activity	
CODE - 3		Sub Element of Activity	

Description of Materials	Soil (A-1-b)			
Location to be Used	558+240 (Right)			
Item	specification	Test requirement	Test result attachment	Remarks
1	ASTM C 136	Sieve Analysis	According to specifications	
2	ASTM D 1140	Passing Sieve, No.200	7.1	
3	ASTM D 4318	Atterberg limit	N.P	
4	ASTM D 2974	Moisture content	6.4	
5	ASTM D 1557	Modified proctor	2.195	
6	ASTM D 1883	COR	37	
Comments by:		Comments by:		

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

* Designer

** Alignment/Bridges: Culvert only

MATERIAL INSPECTION REQUEST



Contractor Company	الإيمان		Designer Company	KK								
Issued by Contractor	Name	Sign	Date	Time								
Contractor Reference	EM-5-6											
Received by ER			MIR	<table border="1"> <tr> <td>41</td> <td>42</td> <td>43</td> <td>44</td> <td>45</td> <td>46</td> <td>47</td> <td>48</td> </tr> </table>	41	42	43	44	45	46	47	48
41	42	43	44	45	46	47	48					

CODE - 1	SR to 311	SR to 31	SR to 311
CODE - 2	Station Reference	Report Reference	SR to 311 Note
CODE - 3	Work Activity		
Sub Element of Activity			

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
	Quantity	Level	From	To	Code
Location to be Used	424.80	Ferma	559+160	559+060	EM-ME-34
	679.68	Ferma	559+320	559+160	EM-LM-35
	1104.48	Total (m3)			

Item	Description	Unit	Quantity	Arrival Date	Note
1	LC & P.L & O.M.C %	M5	5000	07-10-2023	
2	Proctor	M3	5000	07-10-2023	
3	Classification	M3	5000	07-10-2023	
4	Sieve Analysis	M3	5000	07-10-2023	
5	C.B.R	M3	5000	11-10-2023	

Comments by:	Comments by:
--------------	--------------

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

* Designer
** Highways / Bridges / Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	K.K.																								
Issued by Contractor	Name	Sign	Date	Time																								
Contractor Reference	EM-S-1																											
Received by ER			MAR	<table border="1"> <tr> <td>01</td> <td>02</td> <td>03</td> <td>04</td> <td>05</td> <td>06</td> <td>07</td> <td>08</td> <td>09</td> <td>10</td> <td>11</td> <td>12</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	01	02	03	04	05	06	07	08	09	10	11	12												
01	02	03	04	05	06	07	08	09	10	11	12																	

CODE - 1	01 to 023 Station Reference	04 to 09 Deposit Reference	01000 Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	Soil (A-1-b)			
Location to be Used	558+800			
Item	specification	Test requirement	Test result attachment	Remarks
1	ASTM C 136	Sieve Analysis	According to specifications	
2	ASTM D 1140	Passing Sieve No 200	7.2	
3	ASTM D 4318	Atterberg limit	N.P	
4	ASTM D 2974	Moisture content	6.4	
5	ASTM D 1557	Modified proctor	2.747	
6	ASTM D 1883	CBR	30.10	
Comments by:		Comments by:		

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

* Designer
** Alignment/Bridges/Culvert only

MATERIAL INSPECTION REQUEST



Contractor Company	الإيمان		Designer Company	K.K.																		
Issued by Contractor	Name	Sign	Date	Time																		
Contractor Reference	EM-S-2																					
Received by ER			MIR	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	1	2	3	4	5	6	7	8	9									
1	2	3	4	5	6	7	8	9														

CODE - 1	S1 to S23 Station Reference	D1 to D3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
	Quantity	Level	From	To	Code
Location to be Used	652.5	1.25	558+600	558+700	EM-UM-01-02
	913.5	1.25	559+020	559+160	EM-UM-04
	1566	Total (m3)			

Item	Description	Unit	Quantity	Arrival Date	Note
1	LL & P.L & O.M.C %	M3	5000	23-05-2023	
2	Proctor	M3	5000	23-05-2023	
3	Classification	M3	5000	23-05-2023	
4	Sieve Analysis	M3	5000	23-05-2023	
5	C.B.R	M3	5000	28-05-2023	

Comments by:	Comments by:

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

* Designer
** Alignment / Bridges / Culverts Only

MATERIAL INSPECTION REQUEST

Approval



Contractor Company	الإيمان		Designer Company	K.K																				
Issued by Contractor	Name	Sign	Date	Time																				
Contractor Reference	EM-S-4																							
Received by ER			MR	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	1	2	3	4	5	6	7	8	9	10										
1	2	3	4	5	6	7	8	9	10															

CODE 1	SI to 523	DS to 52	Sp XXX Note
CODE 2	Station Reference	Depot Reference	For Kilometer post only SpXt Box is used
CODE 4		Work Activity	
		Sub Element of Activity	

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
	Quantity	Level	From	To	Code
Location to be Used	633.75	1-	558+600	558+700	EM-UM-06
	5.74	2-	558+740		EM-ME-13
	5.74	2-	558+780		EM-ME-14
	125.86	1.75-	558+720	558+740	EM-ME-15
	96.1	1.75-	558+780	558+800	EM-ME-16
	1140.75	1-	559+040	559+220	EM-UM-07
	2007.94	Total (m3)			

Item	Description	Unit	Quantity	Arrival Date	Note
1	L.L & P.I. & O.M.C %	M3	5000	18-07-2023	
2	Proctor	M3	5000	18-07-2023	
3	Classification	M3	5000	18-07-2023	
4	Sieve Analysis	M3	5000	18-07-2023	
5	C.B.R	M3	5000	22-07-2023	

Comments by:	Comments by:

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

* Designer
** Alignment / Bridges / Culvert Only

(مجموع المصارف)					
(EM-UM-24-UM-32-UM-33-UM-34-UM-35-UM-36-UM-37)					
الرقم	معدل الخسارة	الحدود	المبلغ	التاريخ	الترتيب
EM-UM-21	-1.5	558+900 to 558+960	181.93	15-09-2023	1
EM-UM-23	-1	558+760 to 558+740	253.5	15-09-2023	2
EM-UM-24	-1	558+780 to 558+820	253.5	14-09-2023	3
EM-UM-25	-0.75	558+540	44.62	15-09-2023	4
EM-UM-26	-0.5	558+600 to 558+700	439.2	15-09-2023	5
EM-UM-27	-0.25	559+040 to 559+220	777.28	16-09-2023	6
EM-UM-28	-0.25	559+220 to 559+310	435.42	16-09-2023	7
EM-UM-29	-1	558+840 to 558+960	703.25	24-09-2023	8
EM-UM-30	-0.75	558+960 to 559+040	359.57	24-09-2023	9
EM-UM-31	-0.75	558+700 to 558+740	179.78	24-09-2023	10
EM-UM-32	-0.75	558+780 to 558+820	269.68	24-09-2023	11
					12
					13
					14
			3997.73	المجموع	

MATERIAL INSPECTION REQUEST



Contractor Company	الإيمان		Designer Company	K.K										
Issued by Contractor	Name	Sign	Date	Time										
Contractor Reference	EM-S-1													
Received by ER			MIR	<table border="1"> <tr> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	DD	MM	YY	HH	MM					
DD	MM	YY	HH	MM										

CODE-1	51 to 521 Station Reference	D1 to S3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE-2	Work Activity		
CODE-3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
	Quantity	Level	From	To	Code
Location to be Used	854.8	2-	559+020	559+260	EM-ME-01-02
	219.6	2-	558+600	558+680	EM-ME-02
	6.8	2.5-	558+980	559+000	EM-ME-03
	414	1.75-	558+600	558+680	EM-ME-04-02
	1794	1.75-	559+020	559+280	EM-ME-05-02
	537	1.5-	558+600	558+680	EM-ME-06-02
	771.94	1.5-	559+200	559+310	EM-ME-07-02
	4598.14	Total (m3)			

Item	Description	Unit	Quantity	Arrival Date	Note
1	L.L & P.L & O.M.C %	M3	5000	04-04-2023	
2	Proctor	M3	5000	04-04-2023	
3	Classification	M3	5000	04-04-2023	
4	Sieve Analysis	M3	5000	04-04-2023	
5	C.B.R	M3	5000	09-04-2023	

Comments by:	Comments by:

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

* Designer
** Alignment / Bridges Culvert Only

MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	K.K																		
Issued by Contractor	Name	Sign	Date	Time																		
Contractor Reference	EM-S-1																					
Received by ER			MAR	<table border="1"> <tr> <td>EX</td> <td>C1</td> <td>C2</td> <td>C3</td> <td>D1</td> <td>D2</td> <td>YY</td> <td>MM</td> <td>DD</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	EX	C1	C2	C3	D1	D2	YY	MM	DD									
EX	C1	C2	C3	D1	D2	YY	MM	DD														

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

Description of Materials	Soil (A-1-b)		
Location to be Used	558+800		
Item	specification	Test requirement	Test result attachment
1	ASTM C 136	Sieve Analysis	According to specifications
2	ASTM D 1140	Passing Sieve, No 200	7.2
3	ASTM D 4318	Atterberg limit	N.P
4	ASTM D 2974	Moisture content	6.4
5	ASTM D 1557	Modified proctor	2.247
6	ASTM D 1883	CBR	30.10
Comments by:		Comments by:	

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

* Designer
** Alignment/Bridges: Culvert only

MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	K.K															
Issued by Contractor	Name	Sign	Date	Time															
			24/08/2023																
Contractor Reference	EM-S-5																		
Received by ER		MAR	<table border="1"> <tr> <td>CL</td> <td>EL</td> <td>CS</td> <td>DO</td> <td>MSM</td> <td>TF</td> <td>LOT</td> <td>UNIT</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	CL	EL	CS	DO	MSM	TF	LOT	UNIT								
CL	EL	CS	DO	MSM	TF	LOT	UNIT												

CODE-1	S1 to S21 Station Reference	D1 to S2 Depot Reference	Kp 100 Note For Kilometer point only Start Km is used
CODE-2	Work Activity		
CODE-3	Sub Element of Activity		

Description of Materials	Soil (A-1-b)			
Location to be Used	558+800 (Right)			
Item	specification	Test requirement	Test result attachment	Remarks
1	ASTM C 136	Sieve Analysis	According to specifications	
2	ASTM D 1140	Passing Sieve, No 200	8	
3	ASTM D 4318	Atterberg limit	N.P	
4	ASTM D 2974	Moisture content	6.4	
5	ASTM D 1557	Modified proctor	2.268	
6	ASTM D 1883	CBR	43.1	
Comments by:		Comments by:		

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

* Designer

** Alignment/Bridges: Culvert only

MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	K.K																
Issued by Contractor	Name	Sign	Date	Time																
Contractor Reference	EM-S-2																			
Received by ER			MAR	<table border="1"> <tr> <td>CI</td> <td>CI</td> <td>CI</td> <td>DD</td> <td>MM</td> <td>YI</td> <td>HH</td> <td>MM</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	CI	CI	CI	DD	MM	YI	HH	MM								
CI	CI	CI	DD	MM	YI	HH	MM													

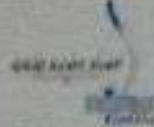
CODE - 1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Rp XXX Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	Soil (A-1-b)			
Location to be Used	558+880			
Item	specification	Test requirement	Test result attachment	Remarks
1	ASTM C 136	Sieve Analysis	According to specifications	
2	ASTM D 1140	Passing Sieve, No 200	7.3	
3	ASTM D 4318	Atterberg limit	N.P	
4	ASTM D 2974	Moisture content	6.4	
5	ASTM D 1557	Modified proctor	2.20	
6	ASTM D 1883	CBR	44.10	
Comments by:		Comments by:		

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

* Designer
** Alignment/Bridges/Culvert only

MATERIAL INSPECTION REQUEST



Contractor Company	الإيمان		Designer Company	K.K															
Issued by Contractor	Name	Sign	Date	Time															
Contractor Reference	EM-S-2																		
Received by ER		MIR	<table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>MM</td> <td>MM</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	C1	C2	C3	DD	MM	YY	MM	MM								
C1	C2	C3	DD	MM	YY	MM	MM												

CODE - 1	53 to 531 Station Reference	01 to 53 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
	Quantity	Level	From	To	Code
Location to be Used	652.5	1.25-	558+600	558+700	EM-UM-01-02
	913.5	1.25-	559+020	559+160	EM-UM-04
	263	1.25-	558+700	558+740	EM-UM-13
	263.5	1.25-	558+780	558+840	EM-UM-14
	63.38	1-	558+540		EM-UM-15
	25.6	1.25-	558+860		EM-UM-16
	281.93	1.5-	558+900	558+960	EM-ME-21
	370.88	0.5-	559+220	559+310	EM-UM-17
	391.50	1.25-	558+960	559+020	EM-UM-18
	702.72	0.5-	559+040	559+220	EM-UM-19
	391.50	1.25-	558+900	558+960	EM-UM-21
	507	1-	558+960	559+040	EM-UM-22
	4827.01	Total (m3)			

Item	Description	Unit	Quantity	Arrival Date	Note
1	L.I & P.L & O.M.C %	M3	5000	23-05-2023	
2	Proctor	M3	5000	23-05-2023	
3	Classification	M3	5000	23-05-2023	
4	Sieve Analysis	M3	5000	23-05-2023	
5	C.B.R	M3	5000	28-05-2023	

Comments by:	Comments by:
--------------	--------------

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

* Designer
** Alignment / Bridges / Culvert / etc

MATERIAL APPROVAL REQUEST



Contractor Company	الإيمان		Designer Company	K.K																
Issued by Contractor	Name	Sign	Date	Time																
Contractor Reference	EM-S-3																			
Received by ER			MAR	<table border="1"> <tr> <td>01</td> <td>02</td> <td>03</td> <td>04</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	01	02	03	04	MM	YY	HH	MM								
01	02	03	04	MM	YY	HH	MM													

CODE - 1	51 to 523 Station Reference	01 to 51 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2	Work Activity		
CODE - 3	Sub Element of Activity		

Description of Materials	Soil (A-1-b)		
Location to be Used	558+800		
Item	specification	Test requirement	Test result attachment
1	ASTM C 136	Sieve Analysis	According to specifications
2	ASTM D 1140	Passing Sieve, No 200	9.7
3	ASTM D 4318	Atterberg limit	N.P
4	ASTM D 2974	Moisture content	5.9
5	ASTM D 1557	Modified proctor	2.252
6	ASTM D 1883	CBR	40.30
Comments by:		Comments by:	

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

* Designer
** Alignment/Bridges/Culvert only

MATERIAL INSPECTION REQUEST



Contractor Company	الإيمان		Designer Company	K.K															
Issued by Contractor	Name	Sign	Date	Time															
Contractor Reference	EM-S-3																		
Received by ER		M/R	<table border="1"> <tr> <td>CL</td> <td>C2</td> <td>C8</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>MM</td> <td>MM</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	CL	C2	C8	DD	MM	YY	MM	MM								
CL	C2	C8	DD	MM	YY	MM	MM												

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

Description of Materials	REPLACEMENT FILL MATERIAL RESULTS				
	Quantity	Level	From	To	Code
Location to be Used	1208.25	1.5-	558+600	558+700	EM-ME-08-02
	1054.02	2-	558+940	559+020	EM-ME-09
	24.18	2.5-	558+920	558+940	EM-ME-10
	750.38	1.5-	559+200	559+310	EM-UM-02-02
	483	1.75-	558+940	559+020	EM-ME-11-02
	229.76	2-	558+920	558+940	EM-ME-12
	261	1.25-	559+160	559+200	EM-UM-03
	728.81	1-	559+200	559+310	EM-UM-05
	4739.4	Total (m3)			

Item	Description	Unit	Quantity	Arrival Date	Note
1	LL & P.L & O.M.C %	M3	5000	16-07-2023	
2	Proctor	M3	5000	16-07-2023	
3	Classification	M3	5000	16-07-2023	
4	Sieve Analysis	M3	5000	16-07-2023	
5	C.B.R	M3	5000	21-07-2023	

Comments by:	Comments by:

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

* Designer
** Alignment / Bridges / Culverts Only



Electric Express Train - HSR
From 6 October City To Abu simbel
section -4 From Snhage To Gena



From Station

PARTICLE SIZE DISTRIBUTION OF SOIL

TESTING DATE:	14/03/2021	code	ZONE	558+560	558+560
LOCATION	558+700	3	Material	natural ground	
NAME COMPANY	AL EMAN		layer thickness		

1-visual inspection test

2-Gradient test

A-gradation of bulk materials				SAMPLE WEIGHT (g)		33285.00	gm	table classify	
sieve size	2	1.5	1	4/3	2/1	8/3	# 4	PASS	soil classify
Mass retained (g)	1920.0	3520.0	3558.0	1973.0	2605.0	1308.0	2561.0		A-1-b
Cumulative Retained (g)	1920.0	5440.0	9000.0	10970.0	13475.0	14783.0	17345.0		2.240
Cumulative Retained %	5.8	16.4	27.0	33.0	46.5	44.4	52.1		WC
Cumulative Passing %	94.2	83.6	73.0	67.0	53.5	55.6	47.9		CBR

B-soft material gradation				WT. OF sample		500.00	gm
sieve size	10	40	200				
Cumulative Retained (g)	45.00	105.00	460.00				
Cumulative Retained %	9.00	21.00	92.00				
Cumulative Passing %	91.00	79.00	8.00				

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 %	94.2	83.6	73.0	67.0	59.5	55.6	47.9	43.6	37.3	1.9

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

Contractor

[Signature]
[Signature]

Consultant

[Signature]
[Signature]



Electric Express Train - HSR



California Bearing Ratio TEST

Testing Date :	19/3/2023	Code :	HRST-STA :	SSN-540	00	SSN-940
Location :	SSN-540	2	natural		natural ground	
Lab. No. :			Labor Elevation :			

Test Results :-

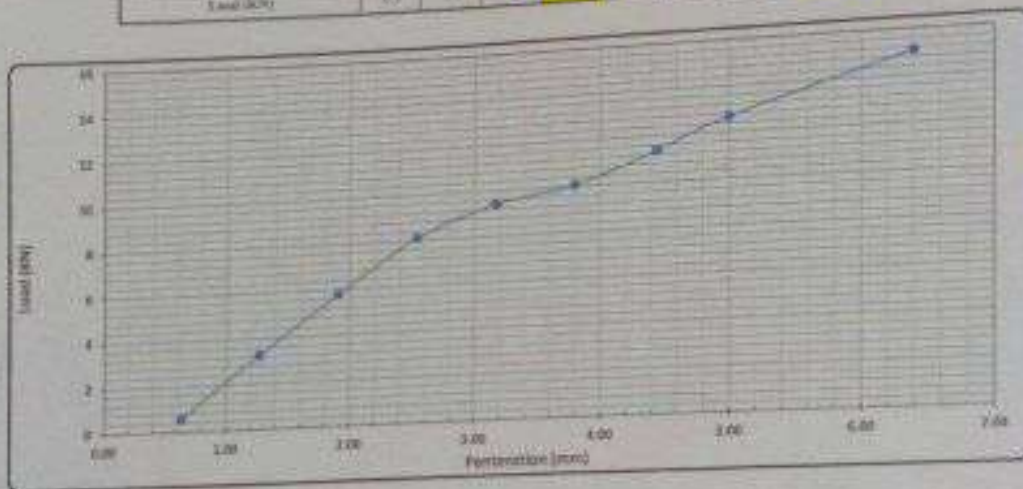
Compaction % for Mold	
Mold No.	1
Mold Volume (cm ³)	2076
Mold Wt. (gms)	7400
Mold Wt. - Moist Wt. (gms)	1318
Max Wt. (gms)	4910
Max Density (g/cm ³)	1.205
Dry Density (g/cm ³)	1.138
Field Density (g/cm ³)	1.140
Compaction %	98

Moisture Ratio After Compacted Mold	
Core No.	2.0
Core Wt. (gms)	20.91
Core Wt. - Moist Wt. (gms)	48.18
Core Wt. - Dry Wt. (gms)	95.21
Moist	3.0
Dry Wt. (gms)	64.3
Moisture Content %	46

Swelling	
Mold No.	2
Moist	11.04%
Swollen Height (mm)	12.00
Final Height (mm)	11.20
Inflations	0.1
Sample Height (mm)	11.15
Swelling Ratio %	0%

Loading Reading :

Penetration (mm)	1.50	1.25	1.00	0.75	0.50	0.25	0.00	0.00	0.00
Load Reading (kg)	20.00	21.50	23.00	24.50	26.00	27.50	29.00	30.50	32.00
Load (kN)	1.96	2.14	2.27	2.40	2.55	2.69	2.83	2.98	3.13



Calculations :-

Penetration	Load	Standard Load	CBR	Mold Compaction	Compaction	CBR
(mm)	(kN)	(lb)	(%)	(%)	(%)	(%)
1.50	1.96	33.4	58.0%	98	98	58.0%
0.25	22.80	20.9	62.0%			62.0%

Lab. Specialist

Name :

Signature :

Lab. Engineer

Name :

Signature :

Construction Engineer

Name :

Signature :



Electricity & Energy Techn. 1998

INNOVATION

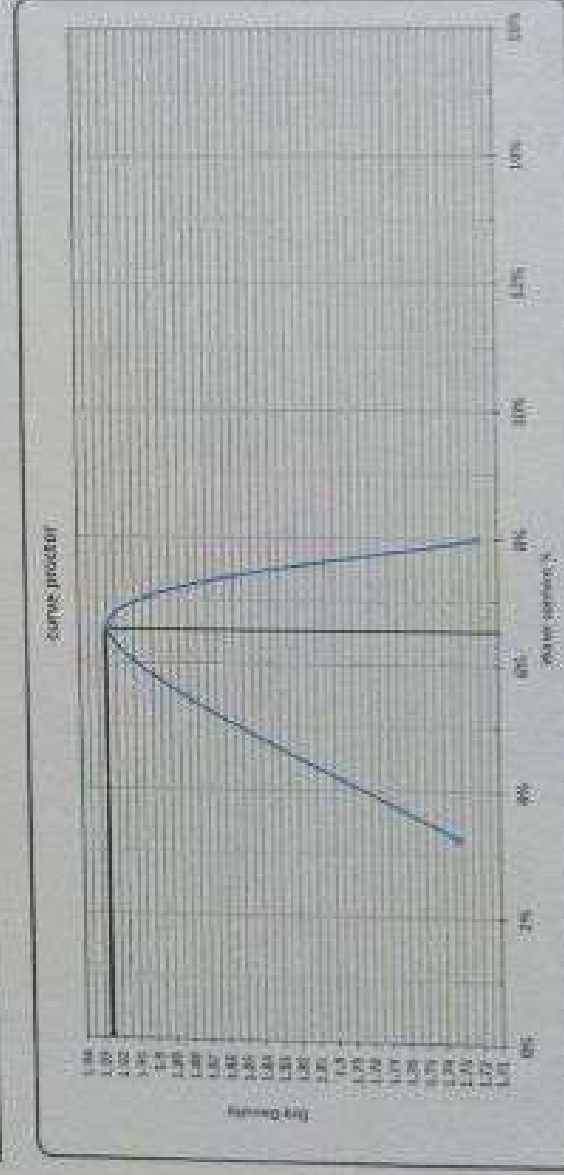
TESTING DATE	10/22/21	Code	System	REQ. DATE	REQ. USER
LOCATION	836680	2	Manual	Manual Created	
SCOPE COMPANY	AT&T		Power Hardware		

Weight of response model:	Value
Student Comments:	0.0000

Water content (%)	0.1
MOA (%) (by dry weight)	0.01

Approved by:	1	2	3	4
Mr. C. J. ...	...	...	...	...
Mr. ...	...	...	...	...
Mr. ...	...	...	...	...
Mr. ...	...	...	...	...

Tube No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Tube no.	16.00	22.14	27.1	27.52	31.07	35.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	



Contributor

100



Electric Express Train - HSR



California Bearing Ratio TEST

Testing Date:	18.1.2023	Grade:	GRADE 1	555-600
Location:	555-600	Material:	Natural Ground	
Layer No.:		2	Layer Thickness:	

Test Results :-

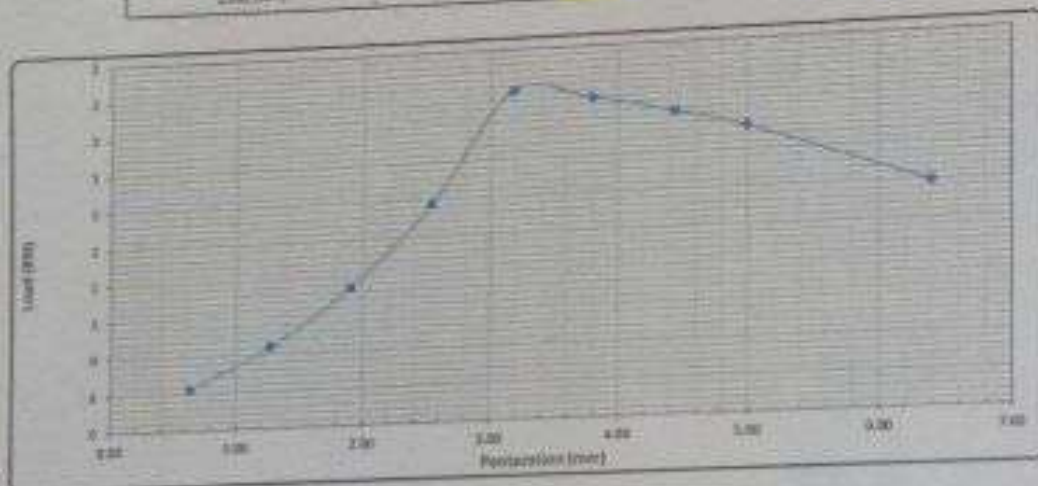
Compaction % for Mold	
Mold No.	1
Mold Vol. (cm ³)	1000
Mold WT. (gm)	7500
Mold WT. - Max WT. (gm)	11000
Max WT. (gm)	4000
Max Density (g/cm ³)	2.500
Dry Density (g/cm ³)	1.800
Proctor Density (g/cm ³)	1.800
Compaction %	90

Moisture Ratio After Compacted Mold	
Test No.	5
Test WT. (gm)	25.2
Test WT. - Dry WT. (gm)	194.27
Test WT. (Dry WT. (gm))	99.8
Moisture Ratio	8.8
Dry WT. (gm)	74.5
Moisture Content %	4.2

Swelling	
Mold No.	1
Date	18/01/2023
Initial Height (mm)	0.30
Final Height (mm)	1.00
Increase	1
Swelling Height (mm)	1.10
Swelling Ratio %	36.6

Loading Reading :-

Penetration (mm)	Load (kg)	Load (kN)	Load (psi)	Load (kN)	Load (psi)	Load (kN)	Load (psi)	Load (kN)	Load (psi)
0.25	1.27	1.30	1.74	1.14	1.80	0.52	0.45	0.45	0.45
0.50	45.00	45.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
0.75	0.4	0.7	0.5	1.6	1.7	1.9	2.3	2.3	2.3



Calculation :-

Penetration	Load	Standard Load	CBR	Load Correction	Correction	CBR
0.25	1.27	100	1.27%	1.27%	1.27%	1.27%
0.50	45.00	100	45.00%	45.00%	45.00%	45.00%
0.75	0.4	100	0.4%	0.4%	0.4%	0.4%

Lab. Specialist

Lab. Engineer

Contract Engineer

Name :

Name :

Name :

Age :

Age :

Age :