

**REPUBLIC OF KENYA**

**MINISTRY OF ROADS AND TRANSPORT**

**STATE DEPARTMENT OF ROADS**

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Ref No. M.2155/35/L/10 Date: 17th April, 2023

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| **Laboratory Test Report** |

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| **1. Customer’s Details:** RESIDENT ENGINEER KeNHA NAIROBI REGION.  **E-mail:** rd.nairobi@kenha.co.ke  **Address: P.O BOX 200-00507 NRB** **Phone:** 0713141871  **2. Customer Contact:** 0713141871 6. **Job Card No.** 2163/S/2023  **3. Sample Description:** Base/Subgrade/ Fill & Native Material 7. **Date fee paid:** 31/03/2023  **4. Sampled by:** MTRD Staff. 8. **GOK MR No**. 4127968  **5. Date Sample received:** 29/03/2023 9. **Date Analysis started**: 06/04/2023  **10. Additional information provided by the customer:** Magumu -Njambini (B110) Road   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | TEST RESULTS | | | | | | | | | | | | | | | | | | | | | **Sample No.** | **Reference** | **Dosage**% | **Grading** | | | | | | | | | **Atterberg Limits** | | | | | **Compaction T180/T99/VH** | | **CBR** | | | % Passing BS Sieve Size (mm) | | | | | | | | | LL | PL | PI | LS | PM |  | OMC (%) | 4days Soak  (%) | Swell (%) | | 20 | 10 | 5 | | 2 | | 0.425 | | 0.075 | % | % | % | % |  | MDD  Kg/m3 | | 838/S/22 | KM 1+100 RHS GCS | Neat | 100 | 71 | 51 | | 38 | | 21 | | 14 | 34 | 28 | 6 | 3 | 126 | 2025 | 7.0 |  |  | | **SOIL COMPOSITION: Gravel = 12%, Sand = 32%, Silt/clay =50%** | | | | | | | | | | | | | | | | | | | 839/S/22 | KM 14+910 LHS Base | Neat | 100 | 88 | 77 | | 61 | | 38 | | 27 | 43 | 36 | 7 | 4 | 266 | 1645 | 20.4 | 35 | 0.2 | | **SOIL COMPOSITION: Gravel = 39%, Sand = 34%, Silt/clay =27%** | | | | | | | | | | | | | | | | | | | 840/S/22 | KM 1+100 RHS S/grade | Neat | 100 | 98 | 94 | 89 | | 68 | | 54 | | 50 | 28 | 22 | 11 | 1496 | 1520 | 18.7 | 10 | 0.9 | | **SOIL COMPOSITION: Gravel = 11%, Sand = 35%, Silt/clay =54%** | | | | | | | | | | | | | | | | | | | 841/S/22 | KM 14+910 LHS S/grade | Neat | 100 | 96 | 90 | 80 | | 59 | | 41 | | 41 | 28 | 13 | 7 | 767 | 1395 | 26.4 | 35 | 0.1 | | **SOIL COMPOSITION: Gravel = 20%, Sand = 39%, Silt/clay =41%** | | | | | | | | | | | | | | | | | | |

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|  | TEST RESULTS | | | | | | | | | | | | | | | | |
| **Sample No.** | **Reference** | **Dosage**% | **Grading** | | | | | | **Atterberg Limits** | | | | | **Compaction T180/T99/VH** | | **CBR** | |
| % Passing BS Sieve Size (mm) | | | | | | LL | PL | PI | LS | PM |  | OMC (%) | 4days Soak  (%) | Swell (%) |
| 20 | 10 | 5 | 2 | 0.425 | 0.075 | % | % | % | % |  | MDD  Kg/m3 |
| 842/S/22 | KM 14+910 LHS Fill Layer | Neat | 100 | 99 | 94 | 84 | 68 | 57 | 48 | 28 | 20 | 9 | 1360 | 1450 | 22.8 | 6 | 0.9 |
| **SOIL COMPOSITION: Gravel = 16%, Sand = 27%, Silt/clay =57%** | | | | | | | | | | | | | | |
| 843/S/22 | KM 14+910 LHS Native Subgrade | Neat | 100 | 99 | 96 | 90 | 76 | 67 | 53 | 30 | 23 | 11 | 1748 | 1355 | 22.8 | 4 | 1.1 |
| **SOIL COMPOSITION: Gravel = 10%, Sand = 23%, Silt/clay =67%** | | | | | | | | | | | | | | |

**Eng. J. M. Mbarua**

**For: CHIEF ENGINEER (MATERIALS)**

**OiC Soils Laboratory. CSE Soils Laboratory**

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