|  |  |
| --- | --- |
|  |  |
| **Annexure MRTS06.1 (March 2023)** |
| **Reinforced Soil Walls** |
|  |
| **Specific Contract Requirements** |
|  |
| **Contract Number**  |  |
|  |
| Note: | Clause references within brackets in this Annexure refer to Clauses in the parent Technical Specification MRTS06 unless otherwise noted. |

Summary of Reinforced Soil Walls Design Submission for Geotechnical Assessment

|  |  |  |  |
| --- | --- | --- | --- |
| To: |  | Date: |  |
| Attention: |  | Wall No: |  |
| Contract No: |  | Chainage: |  |
| Site: |  | Control Line: |  |

|  |
| --- |
| Proprietary wall systemOnly approved products per MRTS06 |
|  |  |

|  |
| --- |
| MaterialsSoil |
| Selected backfill – reinforced fill (constant volume friction angle) |  |
| Selected backfill – free draining material (constant volume friction angle) |  |
| General backfill (constant volume friction angle) |  |
| **Foundation** |  |
| Effective Cohesion Intercept  |  |
| Effective Angle of Shearing Resistance |  |
| Undrained Shear Strength |  |
| Note: Refer Geotechnical Report No. |  |
| **Selected / General Backfill Test Certificates** |  |
| Q 181 C¹ |  |
| **Selected Backfill Test Certificate** |  |
| Particle size distribution² |  |
| Permeability³ |  |
| 1 – 3: Test certificates shall be submitted prior to construction as per MRTS06 |

|  |
| --- |
| Steel reinforcement |
| Tensile Strength (yield stress) | MPa |
| Sacrificial Thickness | mm |
| Cross Bar Spacing and Diameter | mm |
| Design Life | years |

|  |
| --- |
| Geosynthetic reinforcement (Clause 7.4.3) |
|  | Conformance with Clause 7.4.3 of MRTS06 is required.Examples:* Creep rupture strength
* Long‑term connection strength
* Service temperature
* Stiffness
* Long‑term creep
 |

|  |
| --- |
| Loadings |
| Surcharge, q (kPa) =Surcharge 20 kPa in trafficable area and 10 kPa otherwise |  |
| Water Pressure (kPa) |  |
| Wind Loading |  |
| Horizontal Force from Abutment Bearing |  |
| Horizontal Force from Headstock (kN/m) |  |
| Crash Barrier Loading (kN/column) |  |

|  |
| --- |
| Drawings |
| Layout Plan (General Arrangement) |  |
| Contour Plan |  |
| Design Drawings |  |
| Elevation (including mesh layout) |  |
| Sections (actual sections with r/f and drainage details) |  |

|  |
| --- |
| Analysis of sections and results |
|  | Number of Sections analysed: |  |
| Note: Every change of reinforcement strip configuration (for example, length) must be substantiated by analysis. The output of every analysis must be communicated via a cross‑section drawing. |

|  |
| --- |
| RMS Specification (R57) |
| **Height (m) H1** | **Height (m) H2** | **Slope Angle (deg)** | **Min. Embedment (mm)** | **Strap Length (mm)** | **Area / Remarks** | **Load Factors** | **FOS Sliding** | **FOS Over-turning** | **FOS Rupture** | **FOS Pullout** |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

|  |
| --- |
| Foundation bearing requirements |
| Applied Meyerhoff Pressure (kPa)(under Load Case F: R57) |  |
| Maximum Vertical Force on Base, Rv (kN/m) |  |
| Corresponding Horizontal Force on Base, Rh (kN/m) |  |
| Applied Bearing Pressure (from the wall drawings) (kPa) |  |
| Site Verified Allowable Pressure⁴that is, estimated ultimate vertical bearing pressure ≥divided by FOS of 3 | Applied Bearing Pressure |
| ⁴ Site verification of foundation condition shall be submitted prior to construction as per (Clause 9.3) of MRTS06 |

|  |
| --- |
| Global stability (Clause 8.3)As per Clause 8.3 of MRTS06 |
|  |  |

|  |
| --- |
| Inundation due to Temporary or Permanent FloodingA copy of the hydraulic report, if applicable, to be forwarded. |
|  |  |

|  |
| --- |
| Interaction or Constructability Issues |
|  |  |

|  |
| --- |
| Other Considerations |
| Bent / Slanting Reinforcement (mesh) |  |  |
| Transverse Differential Settlement |  |  |
| Longitudinal Settlements |  |  |
| Should have horizontal reinforcement in the absence of any unavoidable constraint (in which case the maximum slope of the strips should not be steeper than 1V:4H). |