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| **Annexure MRTS06.1 (July 2024)** | | |
| **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

*(This form shall be initially completed by the designer where relevant, and then finally completed by the designer/contractor after the internal design conducted by the wall system owner)*

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

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| Proprietary wall system Only approved products per MRTS06 | |
|  | Name of the wall system:  Is it approved as per MRTS06? |

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| MaterialsSoil | |
| **Details of Selected backfill:**   1. Constant Volume Friction Angle of Reinforced Fill Material  * Assumed in the design………………………………………. * Obtained from laboratory testing…………………………….  1. Material Source…………………………………………………. 2. Date of laboratory testing………………………………...……. |  |
| **Details of General backfill:**  Constant Volume Friction Angle of General backfill Material   * Assumed in the design…………………………………..…. * Obtained from laboratory testing……………………….….  1. Material Source…………………………………………………. 2. Date of laboratory testing…………………………………...…. |  |
| **Foundation** |  |
| Effective Cohesion Intercept………………………………………….. |  |
| Effective Angle of Shearing Resistance……………………………... |  |
| Undrained Shear Strength………………………………………….…. |  |
| Reference Geotechnical Report No………………………………….. |  |
| **Selected / General Backfill Test Certificates** |  |
| Test Method Q181 C¹ |  |
| **Selected Backfill Test Certificate** |  |
| Particle size distribution² |  |
| Permeability³ |  |
| 1 – 3: Test certificates shall be submitted prior to construction as per MRTS06 | |

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

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| 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. | | |

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| 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** |
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| 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 Pressure⁴  that 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 Flooding A copy of the hydraulic report, if applicable, to be forwarded. | | | | |
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| 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). | | | | |