**Inspection and Test Plan – Bulk Earthworks**

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| **Project no.** | | **CC0395** | **Project name** | Alltype Civil Works | | | | | **Date** |  | **Approved by** |  |
| **ITP no.** | 001 | | **Revision no.** | 1 | **Revision date** | 04/08/23 | **Layer thickness** | | |  | | |
| **Plant and equipment used** | | | Dozer, Excavator, Grader, Tandem Trucks, Compaction Rollers, Watercart | | | | | | | | | |
| **Lot no.** |  | | **Location (chainages, detailed description or marked up plan)** | | | | |  | | | | |

Attach Dockets, Certificates and QA Documents to ITP

|  | |  | | |  |  |  | | | **Verify of acceptance by** | | | | | **Remarks / record (eg. test frequency, reports, certificates, checklist etc)** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  | | |  |  |  | | | **Symal Infrastructure** | | | **AllType** | |
| **Item no.** | | **Activity** | | | **Ref docs** | **Acceptance criteria** | **Acceptance** | | | **Key** | **Resp.** | **Sign date** | **Key** | **Sign date** |
|  | | | **1.0 Preliminaries** | | | | | | | | | | | | | |
| **1.1** | | Determine lot size | | | Drawings | What is the lot size?  Prepare a lot map for traceability of the work area |  |  | m2 | S | PE |  | S |  | Lot Map | |
|  | | |
| **1.2** | | Survey set-out | | | Drawings  3D Models | Has the work area been set out for line and level? | Yes  No  N/A | | | S | **SE** |  | **S** |  | Checklist | |
| **1.3** | | Excavation material classification | | | 530-SP‐C‐0004 - Earthwoks  CL4.8 | Has the material being excavated been inspected with category agreed upon by Superintendent?  Tick category below:  Top Soil  Unsuitable Material  Embankment Fill Material  Rock Material | Yes  No  N/A | | | S | PE |  | S |  | Checklist | |
| **1.4** | | Fill material classification | | | 530-SP‐C‐0004 - Earthwoks  CL6.1 | Has the material to be used been approved by Client (Material certificates to be provided)? | Yes  No  N/A | | | S | PE |  | S |  | Material certification  Test Report | |
| **1.5** | | Water management | | | ESCP – SEP | Where necessary, have batters been rounded and catch drains constructed to allow for potential surface runoff during the course of excavation? | Yes  No  N/A | | | S | SS |  | S |  | Checklist | |
|  | | | Is the area in **cut / fill / both?**  If in **cut** proceed to step 2.0 and strike out section 3.0.  If in **fill** please strike out section 2.0 and proceed to section 3.0  If in **both** proceed to step 2.0 as well as section 3.0 | | | | | | | | | | | | | |
|  | | | **2.0 Bulk Earthworks – Cut** | | | | | | | | | | | | | |
| **2.1** | | Excavations From Cuttings | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.5 | The cuttings shall be so worked that the best material available, which in the opinion of the APA  Representative is suitable material, shall be placed in embankments*.* | Yes  No  N/A | | | S | SS |  | S |  | Checklist | |
| **2.2** | | Batters | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.7 | The sides of cuttings shall be battered and trimmed to a clean and sharp profile, carried around bends in even curves all to lines and slopes as shown on the drawings provided or directed by the APA Representative. | Yes  No  N/A | | | S | SS |  | S |  | Checklist | |
| **2.2** | | Unsuitable Sub‐Grade Material | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.3 | Unsuitable and sensitive materials such as silt and or organic matter shall be removed from subgrades  to the extent directed by the APA Representative. | Yes  No  N/A | | | S | PE |  | S |  | Checklist | |
| **2.3** | | Sub‐Grades Affected By Moisture | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.4 | When a sub‐grade is unable to support construction equipment, or it is not possible to compact overlying pavement, only because of sub‐grade moisture content, then one or more of the following optional actions may be taken:  a) Allow the sub‐grade to dry to a moisture content that will allow compaction and theplacement of pavement material;  b) Scarify the sub‐grade to a minimum depth of 150 mm and work as necessary to accelerate  drying. Re‐compact as specified when moisture content approaches optimum;  c) Excavate the soft material and replace with compacted select fill material in accordance with  Section 4.4 above. | Yes  No  N/A | | | W | PE |  | H |  | Checklist | |
| **2.5** | | Compaction of Sub‐Grade | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.8 | The sub‐grade shall be compacted to 98% relative dry density (standard compaction) to a depth of  150 mm.  The frequency of testing to confirm this compaction shall be 1 test per 1 000 square metres | Yes  No  N/A | | | H | PE |  | H |  | Test reports | |
|  | | | **3.0 Bulk Earthworks - Fill** | | | | | | | | | | | | | |
| **3.1** | | Unsuitable Foundation Material  Preparation of Natural Surface | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.10 | Where in the opinion of the APA Representative the material exposed after stripping on which  embankments are to be constructed is unsuitable, such material shall be removed and replaced by  approved fill material.  Any soft or saturated areas shall be surface drained. | Yes  No  N/A | | | W | PE |  | W |  | Checklist | |
| **3.2** | | Compaction of material below ground surface under embankments  Preparation of Natural Surface | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.10 | The ground surface shall be compacted to 98% relative dry density (standard compaction) to a depth 150 mm below ground surface. The frequency of testing this compaction shall be at the rate of 1 test per 1 000 m2 of surface area. | Yes  No  N/A | | | H | PE |  | H |  | Test reports | |
| **3.3** | | Fill Material (Site won materials)  Preparation of Natural Surface | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.10 | Only material approved by the APA Representative shall be used from cuttings in the construction of  embankments. Generally the material used shall comply with the following:  A white background with black text  Description automatically generated  All materials used in embankments shall be to the approval of the APA Representative. | Yes  No  N/A | | | H | PE |  | H |  | Test reports | |
| **3.4** | | Fill Material (Imported materials)  Preparation of Natural Surface | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.13 | Where imported fill material is required, it shall be approved by the APA Representative. | Yes  No  N/A | | | H | PE |  | H |  | Checklist | |
| **3.4** | | Construction of Embankments | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.11 | Filling shall be carried out in uniform horizontal layers of not more than 200 mm of loose material and compacted as specified. | Yes  No  N/A | | | S | SS |  | S |  | Checklist | |
| **3.5** | | Trimming of Sub‐Grade | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.12 | The surface of the sub‐grade shall be compacted, trimmed, profiled and check levelled prior to placing of pavement materials.  Design Level Tolerance +0 mm / ‐30 mm | Yes  No  N/A | | | S | SS |  | S |  | Survey Report | |
| **3.6** | | Compaction | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.12 | Earthworks to fill for roadway embankment shall be compacted to 100% relative dry density (standard compaction) for the first 300 mm of embankment depth immediately below the required pavement.  All other earthworks to fill as shown on drawings provided or specified shall be compacted to 98%  relative dry density (standard compaction). | Yes  No  N/A | | | H | PE |  | H |  | Test reports | |
|  | | | **4.0 Conformance check** | | | | | | | | | | | | | |
| **4.1** | | Width and alignment | | | Drawings | Has the pavement been constructed at the correct width and alignment as detailed in the construction drawings? | Yes  No  N/A | | | S | SE |  | S |  | Checklist | |
| **4.2** | | Subgrade level and shape | | | 530-SP‐C‐0003 – Bulk Earthwoks  CL4.12 | Has the prepared subgrade been surveyed in accordance with and verifying specified requirements?  Design Level Tolerance +0 mm / ‐30 mm  Shape Tolerance of 25 mm maximum deviation from a 3 m straight edge laid in any direction. | Yes  No  N/A | | | S | SE |  | S |  | As built report | |
|  |  | | | **Comments**: | | | | | | | | | | | |  |
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| **Lot acceptance:** | | | | |
| Symal Infrastructure representative name |  |  | AllType representative name |  |
| Symal Infrastructure representative signature |  |  | AllType representative signature |  |

**Inspection key: W –** Witness, H **–** Hold Point, **S –** Surveillance

**Responsibility (Resp.): PM –** Project Manager**, PE –** Project Engineer**, SE –** Site Engineer**, SS –** Site Supervisor