**Inspection and Test Plan – Subsurface Drainage**

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| **Project no.** | | **CC-0371** | **Project name** | Subsurface Drainage | | **Date** | **12/10/2022** | | **Approved by** | Maher Moharam |
| **ITP no.** | ITP-SYM-7 | | **Revision date** | 12/10/2022 | **Plant and equipment used** | | |  | | |
| **Lot no.** |  | | **Location (chainages, detailed description or marked up plan)** | | | | |  | | |

Attach Dockets, Certificates and QA Documents to ITP

|  |  |  |  |  | **Verification of acceptance by** | | | | | **Remarks/record (eg. Test frequency reports, certificates, checklist etc)** |
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|  |  |  |  |  | **Symal** | | | **CYP D&C JV** | |
| **Item no.** | **Activity** | **Ref docs** | **Acceptance criteria** | **Freq** | **Key** | **Resp** | **Initial/ date** | **Key** | **Sign/ date** |
| **1.0 General Details** | | | | | | | | | | |
| **1.1** | Material classification and source |  |  | Prior to the Start of Activity | S | SE/PE |  | **H** |  | Compliance cert’s |
| **1.1** | Set Out | Civil drawings | Is the work area clearly pegged out for line and level?  Yes ☐ No ☐ N/A ☐  Subsurface drainage Reference \_\_\_\_\_\_\_\_\_\_\_\_\_  Size of Lot ……………………….. m  Days production or pit to pit  Zone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Stage\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Prior to the Start of Activity | S | SS |  |  |  |  |
| **1.2** | Procedure for method of compaction and placement of no fines concrete filter material. | Construction Document (Drainage)  VR702.05 | Has the method of compaction shall be in accordance with the Contractor’s quality procedures been submitted for review by the Superintendent and approved?  Yes ☐ No ☐ N/A ☐  Has no fines concrete been used as a filter material?  Yes ☐ No ☐ N/A ☐  Has No fines concrete been placed and compacted within 1 hour of mixing?  Yes ☐ No ☐ N/A ☐ | Prior to start of works | S | SS |  | **IR/**  **CYP(S)** |  | As per approved Construction Document |
| **1.3** | Conformity with Drawings | VR702.03  IFC Drawings | Are the drawings, complete & current?  Yes ☐ No ☐ N/A ☐  Is the subsurface drainage pipe or the geocomposite invert level not exceeding 25 mm from the specified level and not more than 50 mm from the specified line. With changes of grade not at a rate exceeding 10 mm in any 3 m length.  Yes ☐ No ☐ N/A ☐ | Prior to start of works  Prior to start of works | H | SE/PE |  |  |  |  Attach completed Permit |
| **1.4** | Excavation Permit &  Penetration Permit | SMP  VR 602.03 | Were all identified underground services marked and potholed to confirm location and depth and no machine excavation within 1m of underground services.  Yes ☐ No ☐ N/A ☐  Relevant permits have been signed and approved.  Yes ☐ No ☐ N/A ☐  Extents and levels correct to relevant drawings  Yes ☐ No ☐ N/A ☐  50mm Blinding to be placed as required to allow working surface and protect excavation.  Yes ☐ No ☐ N/A ☐  Has the trench been excavated to allow 300mm between top of capping and top of subsoil pipe?  Yes ☐ No ☐ N/A ☐ | Prior to start of works | H | SE/PE |  | **H** |  |  |
| **2.0 Subsurface drainage materials and installation** | | | | | | | | | | |
| **2.1** | Pipes | VR702.04  VR702.03  VR 702.09 | Has the Pipe Class and size been confirmed as per latest IFC drawings drawings and project Specs?  Yes ☐ No ☐ N/A ☐  Has the slotted pipe been placed centrally in the trench?  Yes ☐ No ☐ N/A ☐  Have plastic pipes been kept away from sunlight and undamaged during delivery and installation?  Yes ☐ No ☐ N/A ☐  Is the subsurface drainage pipe invert level not exceeding 25 mm from the specified level and not more than 50 mm from the specified line. With changes of grade not at a rate exceeding 10 mm in any 3 m length.  Yes ☐ No ☐ N/A ☐  Is the pipe grade not flatter than 1m in 250m?  Yes ☐ No ☐ N/A ☐ | Each Lot | S | SS |  | **W** |  | Attach Compliance Certificates. |
| **2.2** | Geotextiles | VR702.06  Table 702.061  VR 702.09 | Has the outer covering of the subsurface drain been covered in a geotextile surround if specified?  Yes ☐ No ☐ N/A ☐  Has the geotextile been placed without punctures or tears?  Yes ☐ No ☐ N/A ☐  In expansive clays does the geotextile material extend to directly below the kerb line?  Yes ☐ No ☐ N/A ☐  is the Geotextile material supplied and installed as per latest IFC drawings and project specifications?  Yes ☐ No ☐ N/A ☐ | Each Lot | S | SS |  |  |  | Manufactures Compliance Certificates  **Yes □ No □** |
| **2.3** | Filter material | VR702.05  VR702.13  Table 702.051  Table 702.131  VR 702.09  (g) | Has material been placed in <300mm layers and compacted with minimal disturbance to pipe, geotextile and trench walls?  Yes ☐ No ☐ N/A ☐  Has no fines concrete ratios and specifications applied as per Table 702.051 and VR702.05(e)  Yes ☐ No ☐ N/A ☐  Has crushed rock/concrete ratios and specifications applied as per Table 702.052 and VR702.05(d)  Yes ☐ No ☐ N/A ☐ | Each Lot | S | SS |  | **IR/**  **CYP(W)** |  |  |
| **2.4** | Access points | VR702.10 | Have access points installed at intervals of between 100m and 150 m?  Yes ☐ No ☐ N/A ☐ | Each Lot | S | SS |  |  |  |  |
| **2.5** | Flushing | VR 702.10 | Has the pipe been flushed with water to remove any debris or blockages in the pipe and it’s working correctly with a smooth flow?  Yes ☐ No ☐ N/A ☐ | Each Lot | S | SS |  |  |  |  |

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| **Works complete (signer SS)** | |  | | | **Date works complete** | |  | | | |
| **Lot conforms (signer PE)** |  | | **Date lot closed** |  | | **NCR/s no. raised** | |  | **Date NCR closed for this lot** |  |

**Responsibility (Resp.) Key**: **PM**-Project Manager, **PE**-Project Engineer, **SE**- Site Engineer, **CS**-Civil Superintendent, **SS**-Site Supervisor, S**V**-Surveyor, **CR**-Client Representative

**SI –** Superintendent

**Inspection Key: W –** Witness, **H –** Hold Point, **S –** Surveillance, **R –** Review Point, **I –** Inspection Point