**Inspection and test plan – Insitu Concrete Elements**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project no.** | | **CC – 0371** | **Project name** | Parkville Urban Realm Works | | **Date** | **09/10/2022** | | **Approved by** | Maher Moharam |
| **ITP no.** | ITP-SYM-008 | | **Revision date** | 09/10/2022 | **Plant and equipment used** | | |  | | |
| **Lot no.** |  | | **Location (chainages, detailed description or marked up plan)** | | | | |  | | |

Attach Dockets, Certificates and QA Documents to ITP

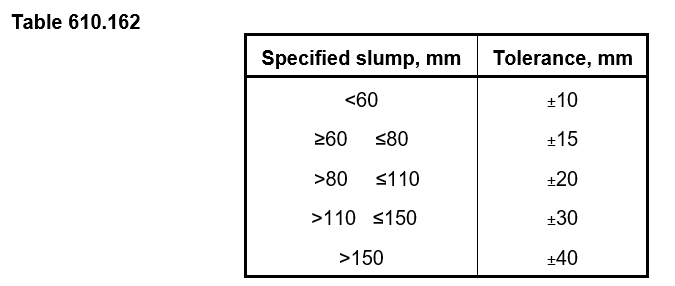
|  |  |  |  |  | **Verification of acceptance by** | | | | | **Remarks/record (eg. Test frequency reports, certificates, checklist etc)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | **Symal** | | | **CYP D&C JV** | |
| **Item no.** | **Activity** | **Ref docs** | **Acceptance criteria** | **Freq** | **Key** | **Resp** | **Initial/ date** | **Key** | **Sign/ date** |
| **1. 0 General Details** | | | | | | | | | | |
| **1.1** | Material classification and source | 503.04  VR 610.07  AS 1379 | Is Mix design approved prior to placemen and material properties meet project specification, AS 3600, AS 1379.  Yes ☐ No ☐ N/A ☐  Concrete Strength\_\_\_\_\_\_\_\_ MPA | Prior to start of works | S | SE/PE |  | **IR/**  **CYP(R)** |  |  |
| **1.2** | Set Out | Civil drawings | Is the work area clearly pegged out for line and level?  Yes ☐ No ☐ N/A ☐  Wall/Footing Reference \_\_\_\_\_\_\_\_\_\_\_\_\_  Zone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Stage\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Element Description \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Prior to the Start of Activity | S | SS |  |  |  | Attach Drawings |
| **1.3** | Conformity with Drawings | VR Clause 701.10 | Are the drawings, complete & current?  Yes ☐ No ☐ N/A ☐ | Prior to start of works | H | SE/PE |  |  |  | Attach Recent IFC Drawings |
| **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 ☐  Excavation to a total depth of \_\_\_\_\_\_\_mm | Prior to start of works | **H** | SE/PE |  | **H** |  |  Attach completed Permit |
| **2.0 Insitu concrete Element** | | | | | | | | | | |
| **2.1** | Ground Preparation | IFC Drawings  VR 610 | Is the fill and base of the foundation compacted to achieve at least 98% and achieving Geotechnical strength as per the design requirements.  Yes ☐ No ☐ N/A ☐  Has the surface shall be thoroughly moistened with water and excess surface water removed prior to placing concrete.  Yes ☐ No ☐ N/A ☐ | Each lot | R | SE/PE |  |  |  |  |
| **2.2** | Formwork | Civil drawings.  Project Specs  VR 614.04  VR 613.04  Table 614.041 | Formwork has been installed correctly and sufficiently braced.  Yes ☐ No ☐ N/A ☐  formwork set out has been done as per latest design drawings and specifications  Yes ☐ No ☐ N/A ☐  Were Construction joints/Expansion Joints/Isolation Joints /or any type of joint as specified in the drawings Installed  Yes ☐ No ☐ N/A ☐  Any Backfill/ Underlay Material as per drawings & specifications  Yes ☐ No ☐ N/A ☐  was Installations of Cast-Ins/ HD bolts/ Chemical Anchors/Block out Verified  Yes ☐ No ☐ N/A ☐  Is the concrete member of height greater than 2m and a formwork design obtained with a certificate of compliance from a Proof Engineer forwarded to the Superintendent for approval?  Yes ☐ No ☐ N/A ☐ | Prior to start of works | S | SE/PE |  | **W** |  | Attach formwork design and approvals |
| **2.3** | Reinforcement | AS3600  VR611  VR610 | Tolerance - As per specifications and Australian Standard and minimum cover for steel reinforcement is 40mm.  Yes ☐ No ☐ N/A ☐  steel is free of excess corrosion, loose millings, oil or other contaminants  Yes ☐ No ☐ N/A ☐  Required Connection details - U Bars/ Z Bars/  Cogs Verified/Starter bars  Yes ☐ No ☐ N/A ☐  Correct concrete cover and chairs on sides, bottom and top Verified  Yes ☐ No ☐ N/A ☐ | Each Lot | S | SS |  | **IR/**  **CYP(W)** |  |  |
| **2.4** | Pre-pour Inspections | Civil drawings.  Project Specs | Has steel reinforcement been placed correctly with adequate cover?  Yes ☐ No ☐ N/A ☐  Have tie bars and expansion joints been installed at the correct intervals?  Yes ☐ No ☐ N/A ☐  pour area is free of loose debris, oils, water  Yes ☐ No ☐ N/A ☐  Have any services located within the slab been installed, surveyed and pinned down  Yes ☐ No ☐ N/A ☐  Concrete Testing Lab Representative will be available during concrete pour  Yes ☐ No ☐ N/A ☐  CYP D&C JV informed of concrete pour date and start time  Yes ☐ No ☐ N/A ☐ | Prior to start of each Concrete Pour | H | SS |  | **IR(W)/**  **CYP(H)** |  |  |
| **2.5** | Concrete Placement | VR503.07  VR503.05 | Has concrete been transported, handled and placed to prevent segregation, loss or leakage of materials and air temp within 5 to 35 degrees C  Yes ☐ No ☐ N/A ☐  Has Concrete been tamped/vibrated to increase density and prevent voids, honeycombing or surface defects.  Yes ☐ No ☐ N/A ☐  Has a minimum of one of vibrator used at all times while the concreting is in operation  Yes ☐ No ☐ N/A ☐  Ensure monitoring forms/cast in items during the pour  Yes ☐ No ☐ N/A ☐  Concrete Work(s) completed to specification/drawings & Area left clean/tidy  Yes ☐ No ☐ N/A ☐  Concrete Dockets Received, Attach last Docket  Yes ☐ No ☐ N/A ☐  Pour date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Total pour Concrete quantity\_\_\_\_\_\_\_\_\_\_\_\_\_M3 | Each Lot | S | SS |  | **W** |  |  Delivery Doc   Conc pour record |
| **2.5** | Post Pour | Civil drawings.  Project Specs  VR 610 | Was Curing agent applies as per project specifications  Yes ☐ No ☐ N/A ☐  Concrete reached design strength to strip formwork  Yes ☐ No ☐ N/A ☐  Any identified defects after striping rectified  Yes ☐ No ☐ N/A ☐  Attach Subcontractor’s QA  Yes ☐ No ☐ N/A ☐  Does Backfill material comply with Vicroad specs, Project specs and drawings?  Yes ☐ No ☐ N/A ☐  Were as Built completed? Attach report if applicable  Yes ☐ No ☐ N/A ☐  Concrete reached design strength to strip formwork. (Attach test results)  Yes ☐ No ☐ N/A ☐  Were expansion joints placed at intervals less than 10m.  Yes ☐ No ☐ N/A ☐ | Each Lot | S | SS |  | **IR/**  **CYP(W)** |  |  Attach concrete Test Report   Attach As built report |
| **2.6** | Backfilling | VR703.29 | were topsoil placed and compacted on layers not exceeding 150mm in thickness and not exceeding 300mm in width not earlier than 3 days after concrete pour?  Yes ☐ No ☐ N/A ☐  Were the positions of any existing conduits passing under edgings marked by a chase in the edging immediately above the conduit together with a suitable identification mark.  Yes ☐ No ☐ N/A ☐ | Each Lot | R | SE/PE |  | **IR/**  **CYP(W)** |  |  |

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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 **I–** Inspection

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| --- | --- | --- |
| **Table 610.241** | **Exposure Classification** | **Maximum Acceptable Crack Widths (mm)** |
|  | A | 0.20 |
|  | B1 | 0.20 |
|  | B2 | 0.15 |
|  | C, U | 0.10 |

**Table 610.161**

|  |  |
| --- | --- |
| **Volume Cast in One Continuous Operation**  **(cubic metre)** | **Minimum Number of Samples** |
| 0 to 10 | 1 |
| 10 to 25 | 2 |
| 25 to 50 | 3 |
| 50 to 100 | 4 |

For each additional 50 m³ one additional sample shall be taken.

**Table 614.041**

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| --- | --- | --- | --- | --- |
| **Concrete members** | **Formwork documentation** | **Certification of formwork design** | **Proof Engineering of formwork design** | **Certification of erected formwork** |
| (a) Abutments, pilecaps, footings, solid piers, pier columns and walls, with heights less than or equal to 2.0 metres | N/A | N/A | N/A | Contractor’s Engineer  (Attachment C, as per clause 614.08) |
| (b) Abutments, pilecaps, footings, solid piers, pier columns and walls, with heights greater than 2.0 metres  (c) All other concrete members  (d) Any member for which self-compacting concrete is proposed | Design drawings and specifications | Design Engineer | Proof Engineer  (Attachment A, as per this clause) | Contractor’s Engineer and  Design Engineer  (Attachment B, as per clause 614.08) |

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