Inspection and test plan – Carbon Steel Installation

Project no. CC0398 **Project name** VIVA ULSG **Date** 05/03/2024 **Approved by** Ari Birch
ITP no. 034 **Revision no.** B **Revision date** 26/03/2024 **Plant and equipment used** Excavator, Bobcat, Welder,
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 Infrastructure		MDR/VIVA		
Item no.	**Activity**	**Ref docs**	**Acceptance criteria**	**Acceptance**	**Key**	**Sign date**	**Key**	**Sign date**	
1.0 Preliminaries									
1.1	Set out		Is the position of the pipe in accordance with the drawings? IFC and latest available revision used?	☐ Yes ☐ No ☐ N/A	H		W		
1.2	IFC Submission & Approval	Isometric Drawings	Is IFC Construction Drawing and Most Current Revision Approved by the client?	☐ Yes ☐ No ☐ N/A	H		H		☐ Isometric Drawings
1.3	Permits	Symal Safety Procedure	Have the below permits been created. -GPP -Working at Heights -Hot Works -Confined Space	☐ Yes ☐ No ☐ N/A	H		W		
1.4	Determine Lot Size		What is the lot size?	☐ Yes ☐ No ☐ N/A	S		W		
1.5	Free Issue Materials		Have the free issue materials been accepted and checklist completed? Have the materials and tag numbers/heat numbers been verified?	☐ Yes ☐ No ☐ N/A	W		W		☐ Material Inspection Checklist
1.6	Pre-Qualifications	Welder Qualifications and tickets. This ITP	Welding procedures, equipment to be used, welding qualifications and calibration of welding machines to be submitted and approved by the client, has this been completed? Has the training records for the STOPAQ applicators been provided?	☐ Yes ☐ No ☐ N/A	H		H		☐ Welding Qualificaitons

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1.7	Bedding and Backfill Materials Approval	235929-000-CV-SP-00006 UG PIPE FAB and INSTALL Section 12.1.8	Has bedding and backfill materials been approved for use?	☐ Yes ☐ No ☐ N/A	H		H		☐ Material Approval
2.0 Excavation and bedding									
2.1	Service Location	DBYD & Services marked on current IFC drawings (if applicable)	Current DBYD documents received and works executed by qualified service locator	☐ Yes ☐ No ☐ N/A	H		S		
2.2	Excavation	235929-000-CV-SP-00006 UG PIPE FAB and INSTALL Section 12.1.12	Excavation shall be to depth adequate to provide full specified bedding depth of 100mm. Minimum trench width as per manufacture specifications pg. 17 is 1.25 x OD + 300mm. Earthworks for trenches shall be done in accordance with standard drawing, has this been completed?	☐ Yes ☐ No ☐ N/A	W		S		
2.3	Bedding material	235929-000-CV-SP-00006 UG PIPE FAB and INSTALL Section 12.1.8	Has the bedding material been installed as per the manufacturer's specification? Conforms IFC drawing (if applicable)? Bedding depth minimum 100mm Overlay depth minimum 300mm.	☐ Yes ☐ No ☐ N/A	S		S		☐ Delivery Dockets

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3.0 Fabrication									
3.1	Welding	235929-000-CV-SP-00006 UG PIPE FAB and INSTALL 235929-RE-ENG-INT-0003-WIITP – P11U 235929-RE-ENG-INT-0003-WIITP – P11P RE-ENG-INT-0072-PR	Have the lengths been welded as per the manufacturers spec and welding duration?	☐ Yes ☐ No ☐ N/A	H		W		☐ Carbon Steel Subcontractors ITP ☐ Welding Log
3.2	Non-Destructive Testing	235929-RE-ENG-INT-0003-WI 235929-RE-ENG-INT-0003-WIITP – P11U 235929-RE-ENG-INT-0003-WIITP – P11P	Have the welds been tested as per the ITP's referenced in the isometric drawings?	☐ Yes ☐ No ☐ N/A	H		W		☐ Carbon Steel Subcontractors ITP
3.3	Coating and wrapping	235929-RE-ENG-INT-0003-WI	Has the application procedure been provided to MDR and approved?	☐ Yes ☐ No ☐ N/A	H		W		☐ Carbon Steel Subcontractors ITP

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		235929-RE-ENG-INT-0003-WIITP – P11U 235929-RE-ENG-INT-0003-WITP – P11P Isometric Drawings RE-ENG-INT-0045-PR	Have the welds been wrapped as per the drawings and specification?						
4.0 Laying									
4.1	Lifting into trench	235929-000-CV-SP-00006 UG PIPE FAB and INSTALL Section 12.2.1 Item 12.2.7	Before lowering in, caps shall be placed on open ends, flanges, etc., which shall remain in place until piping connection can be made. Particular attention shall be given to the need to protect pipes from damage due to loads from heavy plant, has this been completed? Have pipes been laid to true line and level?	Yes ☐ No ☐ N/A	H		S		
4.2	Haunching	235929-000-CV-SP-00006 UG PIPE FAB and INSTALL	Has the backfill material been haunched appropriately around the pipe?	Yes ☐ No ☐ N/A	W		S		
4.3	Pressure Testing	235929-000-CV-SP-00006 Section 13.4	Is Air Testing or Hydrostating testing being completed? ☐ Air Testing ☐ Hydrostatic Testing What is the test pressure? _____	☐ Yes ☐ No ☐ N/A	H		W		☐ Testing checklist

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			Has Testing been conducted to all joints and inspected to confirm no leaks?						
4.4	Backfill Materials	235929-000-CV-SP-00006 UG PIPE FAB and INSTALL	Has Sand Back fill been placed to 300mm above Pipe? No compaction equipment to be used until 300mm above pipe. Has select backfill been placed in layers not exceeding 150mm loose thickness? No compaction equipment has been used between 0-300mm above top of pipe, light compaction equipment has only been used from 300-600mm. above pipe.	Yes ☐ No ☐ N/A	W		S		
4.5	Backfill and Compaction	235929-000-CV-SP-00006 UG PIPE FAB and INSTALL	Sand Fill - not less than 90% of maximum density or 70% of relative density, except that under paved areas the entire depth shall be compacted in 150mm layers to not less than 95% of maximum density or 80% relative density. Select Fill - Backfill under pavements shall be compacted to a dry density ratio of no less than 98% modified comp active effort. Backfill to be in 250mm compacted layers. Testing Frequency: Minimum 2 field density tests for each 185 m2 of each compacted fill layer, but no less than 3 tests for total area Has compaction testing been completed as per the project specifications?	☐ Yes ☐ No ☐ N/A	W		S		☐ Compaction Testing Results
5.0 Testing and Conformance Check									
5.1	Test Pack		Has a test pack been provided?	☐ Yes ☐ No ☐ N/A	H		H		☐ Testing Log

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			Test pack to include. - Test Procedure - Test Map - Equipment Calibration - Equipment Details - Exclusion zones if require Provision of testing log template						
5.2	Survey		Tolerances in alignments shall be limited to +/- 25 mm vertically or horizontally, unless otherwise specified on engineering drawing, has this been completed?	☐ Yes ☐ No ☐ N/A	W		W		☐ Survey as-built
5.3	Quality Submission		Have all QA documents in-line with the specification been provided to MDR for review?	☐ Yes ☐ No ☐ N/A	H		H		

Comments:

Lot acceptance:

Symal Infrastructure representative name _____ MDR representative name _____

Symal Infrastructure representative signature _____ MDR representative signature _____

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