

**Client:** DTP – Barwon Southwest Region

**Contract No:** N/A

**Prepared By:** Jarrod Rodrigues

**Project:** Spout Ck Bridge Replacement

**Reviewed By:** Jarrod Rodrigues

**Date:** 16/01/23

**Construction Process:** Drilling and Setting of Bonded Anchors

**Approved By:** Jarrod Rodrigues

**Date:** 16/01/23

**Specifications:** VicRoads Standard Section 680

**Structure / Component:** Bonded Anchors

<b>Lot No:</b>	<b>Lot Details:</b>	<b>Lot size/Quantity:</b>	<b>Date:</b>
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Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/ IP/ TP/ SCP	Responsibility	Checked by:			
		Frequency	Acceptance Criteria	Reference Documents	Inspection/Test Method	Record of conformity			Client	Fulton Hogan	Date	
1.0	Preliminary Works											
1.1	Check for Correct Documentation	Prior to commencing works.	Ensure that all employees and subcontractors are using the complete set of the correct and most current drawings.	Project IFC Drawings and Drawings Register	Visual Inspection	Signed Inspection & Test Plan (ITP)	HP*	Project Engineer/Site Supervisor				
1.2	Implementation of all measures and controls	Prior to commencing any works on site.	All necessary measures and controls are being implemented, that is: PMP, EMP, ECP, TMP, SWMS	PMP, EMP, ECP, TMP, SWMS	Visual Inspection	Signed Inspection & Test Plan (ITP)	HP*	Project Engineer				
1.3	Service Identification & Excavation Permit	Prior to commencing any works on site.	All services are located, and the relevant service authorities have been consulted and permits obtained.  Ensure an excavation permit is issued and all involved personnel are briefed about the services in the area before signing onto the permit.	DBYD	Verify	Signed Inspection & Test Plan (ITP)	HP*	Project Engineer				
1.4	Training and Competency	Prior to commencing any works on site.	The bonded anchor installers, and all of its site personnel, shall be certified by the AEFAC, and shall provide evidence of this certification and of its competency acceptable to	VicRoads Standard Section 680 Clause 680.06	Verify	Signed Inspection & Test Plan (ITP)	HP*	Project Engineer/ Site Supervisor/ Superintendent				

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			<p>the Superintendent.</p> <p>All personnel, including supervisory personnel, who are required to install bonded anchors shall also be trained on-site by the supplier of the bonded anchor system in the specific installation requirements of the project before bonded anchor installation works commence.</p>								
<b>2.0</b>	<b>Construction Works</b>										
2.1	Survey & Set Out	Each Lot	Ensure line and level of all bonded anchor holes is in accordance with design levels, survey files and drawings.	Project IFC Drawings and Survey Data	Visual Inspection	Signed Inspection & Test Plan (ITP)	HP*	Project Engineer/Site Supervisor			
2.2	Trial Installation	Each Lot	The Contractor shall not proceed with the permanent bonded anchor installation works until the trial system installation have been carried out and the outcomes reviewed and approved by the Superintendent.	VicRoads Standard Section 680 Clause 680.11	Visual Inspection	Signed Inspection & Test Plan (ITP)	HP	Project Engineer/ Site Supervisor/ Superintendent			
2.3	Drilling & Roughening of Anchor Holes	Each Lot	The Contractor shall not proceed with drilling or cutting holes into the concrete, installation or removal of bonded anchor works until the WMS and ITPs have been reviewed and approved by the Superintendent.	<p>Drawing No.578259 – 578276</p> <p>VicRoads Standard</p>	Visual Inspection	Signed Inspection & Test Plan (ITP)	HP	Project Engineer/ Site Supervisor/ Superintendent			

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			Ensure hole depths and widths are drilled in accordance with Project IFC Drawings.	Section 680 Clause 680.11							
2.4	Placement of Bonded Anchors	Each Lot	<p>Ensure materials being used are in accordance with standard specifications and design drawings.</p> <p>Chemical adhesives shall be allowed to gain strength for the minimum time specified by the manufacturer's installation instructions before torque is applied to bolts and load is applied to the bonded anchor system.</p> <p>Ensure bonded anchor casting register is populated including relevant details such as cast date, cast time, ambient temperature and time of casting, material batch no., and material batch expiry date.</p>	VicRoads Standard Section 680	Visual Inspection	Signed Inspection & Test Plan (ITP)	HP*	Project Engineer/Site Supervisor/Superintendent			
<b>3.0</b>	<b>Testing</b>										
3.1	Calibration of Testing Equipment	Each Lot	One week prior to testing the Contractor shall submit to the Superintendent calibration certificates conforming to the requirements of AS 2193 Grade B for the jack and pressure gauges or other force measuring device to be used.	VicRoads Standard Section 680 Clause 680.09	Test Point	Test Report	HP	Project Engineer/Site Supervisor			

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3.2	Test Method	Each Lot	Details of the test method including load increments and duration of sustained loading shall be submitted to the Superintendent for review not later than one week prior to the testing.	VicRoads Standard Section 680 Clause 680.09			HP	Project Engineer/Site Supervisor/Superintendent			
3.3	Testing of Bonded Anchors	Each Lot	<p>Ensure a minimum of 20% of all bonded anchors subject to tensile loads, a combination of tensile and shear loads, or fatigue loads are tested and deemed to meet the minimum strength requirements.</p> <p>- 50 kN</p> <p>The Contractor shall provide a test report to the Superintendent for review.</p> <p>If a bonded anchor fails either the ultimate load testing for suitability or the bonded anchor proof load test, the Contractor shall submit rectification proposals for review by the Superintendent prior to any further bonded anchor installation.</p>	VicRoads Standard Section 680 Clause 680.09			HP	Project Engineer/Site Supervisor/Superintendent			

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**Final Inspection**

The signature below verifies that this ITP has been completed in accordance with the SWA's Quality system Procedures and verifies lot compliance with specifications.

**Print Name:**
**Position:**
**Signature:**
**Date:**        /        /

**Legend:**

<b>HP</b>	Hold Point	Work shall not proceed past the HP until released by the Superintendent	<b>IP</b>	Inspection point	Formal Inspection to be done and recorded
<b>HP*</b>	FH Hold Point	Work shall not proceed past the HP* until released by the FH Superintendent	<b>TP</b>	Test Point	Product compliance test to be undertaken and recorded/reported
<b>WP</b>	Witness Point	An inspection which must be witnessed by the Superintendent	<b>SCP</b>	Survey conformance point	A qualified surveyor to check product/section/structure and report
<b>AP</b>	Approval Point	Written or verbal approval given by the Superintendent			