



Australian Government

RIICFW302E Install temporary and permanent rock anchors

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to install temporary and permanent rock anchors in civil construction. This includes setting up anchor holes, installing permanent anchor bolts finished with mesh and shotcrete, installing temporary anchor bolts, and stressing, locking and sealing anchors.

It applies to those working in operational roles. They generally work under minimal supervision to undertake a broad range of tasks in varied work contexts, using some discretion and judgement in selecting equipment, services or contingency measures.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories and industry sectors. Users must check requirements with relevant body before applying the unit.

Unit Sector

Civil construction

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare to install rock anchor	1.1 Obtain, interpret, clarify and confirm work instructions 1.2 Access, interpret and apply documentation required to install rock anchors and confirm work activity is compliant 1.3 Obtain and interpret emergency procedures, and identify steps required to respond to emergencies 1.4 Select and wear personal protective equipment according to site requirements 1.5 Confirm and identify requirements for complying with environmental protection, safety and traffic management signage

ELEMENT	PERFORMANCE CRITERIA
	<p>requirements</p> <p>1.6 Identify potential hazards and environmental issues, implement control measures within scope of own role and escalate where required</p> <p>1.7 Select plant, tools and equipment required to carry out tasks and check for faults</p> <p>1.8 Identify, confirm, and locate materials required for work application</p>
2. Set up and prepare anchor holes	<p>2.1 Drill holes to depth and diameter according to job requirements</p> <p>2.2 Clean holes</p> <p>2.3 Confirm bond length of holes for permanent anchors are tested for leakage, grouted, re-drilled and retested according to job requirements</p> <p>2.4 Cover holes temporarily to prevent entry of foreign material</p>
3. Install anchors to anchor holes	<p>3.1 Confirm components align with job requirements</p> <p>3.2 Grease, sheathe and assemble anchors according to job requirements</p> <p>3.3 Prepare temporary anchors with spacers and fit grout tubes according to job requirements</p> <p>3.4 Prepare permanent anchors with spacers, fit grout tubes and prepare external polyethylene sheath according to job requirements</p> <p>3.5 Install anchors and sheaths to full depth according to job requirements</p> <p>3.6 Set up grouting plant and flow monitoring apparatus according to job requirements</p> <p>3.7 Mix and pump grout into hole according to job requirements</p>
4. Set up anchorage assembly and stress anchors	<p>4.1 Position anchorage using packing materials</p> <p>4.2 Stress anchors to loads specified by job requirements</p> <p>4.3 Lock off anchors to loads specified by job requirements</p> <p>4.4 Install mesh according to job requirements</p> <p>4.5 Apply shotcrete according to job requirements</p> <p>4.6 Monitor permanent anchors at scheduled intervals, and record anchor's residual load</p> <p>4.7 Cut anchors according to job requirements and seal</p>
5. Conduct clean-up activities	<p>5.1 Clear work area and dispose of or recycle materials according to site requirements</p> <p>5.2 Clean, check, perform maintenance on and store plant, tools and equipment according to manufacturer specifications and site requirements</p>

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	<ul style="list-style-type: none">• Calculates basic measurements including mass and dimensions
Oral communication	<ul style="list-style-type: none">• Identifies and interprets information from verbal instructions• Conveys information and instructions to others verbally
Self-management	<ul style="list-style-type: none">• Monitors and minimises own exposure to worksite risks and hazards during work activities

Unit Mapping Information

Supersedes and is equivalent to RIICFW302D Install temporary and permanent rock anchors.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>