



Australian Government

RIICTT401E Supervise the installation of underground services using trenchless technology

Release: 1

RIICTT401E Supervise the installation of underground services using trenchless technology

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 supervise the installation of underground services using trenchless technology in civil construction, including preparing team members to install underground services and overseeing and reporting on task execution.

It applies to those working in supervisory or technical specialist roles. They generally perform a broad range of operational activities in their area of responsibility and are responsible for monitoring a safe work environment.

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 underground services	1.1 Obtain, interpret, clarify and confirm work requirements 1.2 Access, interpret and apply documentation required to install underground services using trenchless technology and confirm work activity is compliant 1.3 Identify and address potential risks, hazards and environmental issues and implement control measures 1.4 Select and wear personal protective equipment according to site requirements

ELEMENT	PERFORMANCE CRITERIA
	1.5 Confirm job plan is available and meets task requirements
2. Confirm appropriate initiation of tasks	2.1 Confirm required resources are available to meet job requirements 2.2 Communicate instructions to team members and other involved personnel according to job requirements 2.3 Set out tasks required to complete work activity according to job requirements
3. Oversee execution of tasks	3.1 Monitor asphalt paving and compaction task performance and confirm outcomes are achieved according to job requirements 3.2 Initiate adjustments to work practice and job plans as required to meet job requirements 3.3 Confirm plant, equipment and tools maintenance is carried out and recorded according to manufacturer specifications and site requirements
4. Report on execution of tasks	4.1 Complete and submit reports according to site requirements 4.2 Recommend required changes to confirm task execution meets job requirements

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	Calculates resourcing requirements and performs mathematical calculations
Oral communication	Conveys information and requirements clearly and listens actively
Writing	Prepares specific information that complies with requirements, using sector-specific vocabulary, grammatical structures and conventions

Unit Mapping Information

Supersedes and is equivalent to RIICTT401D. Apply the principles for the installation of underground services using trenchless technology.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for RIICTT401E Supervise the installation of underground services using trenchless technology

Modification History

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

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- supervise the installation of underground services using trenchless technology on at least two occasions, including:
 - overseeing the completion of underground service installation
 - monitoring and adjusting work programs where required to achieve outcomes
 - recommending improvements for safety and efficiency
 - applying operational techniques, including at least one of the following methods:
 - impact moling
 - ramming
 - augering
 - fluid assisted directional boring
 - micro tunnelling
 - pipe jacking.

During the above, the candidate must:

- locate and apply required documentation, policies and procedures
- implement the requirements, procedures and techniques for the supervision of installing underground services using trenchless technology, including:
 - accessing or developing the job plan and making it available to team members
 - monitoring asphalt paving and compaction task performance
 - confirming maintenance is carried out and recorded
- work with others to supervise the installation of underground service using trenchless technology that meets all the required outcomes, including:
 - providing written and verbal instructions
 - completing written and verbal reporting requirements and procedures

- preparing for and conducting briefings, toolbox and site meetings
- Organising work activities to meet task requirements
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Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislation required to supervise the installation of underground services using trenchless technology
- policies, procedures and documentation to supervise the installation of underground services using trenchless technology, including those relating to:
 - work health and safety
 - environmental protection
 - waste management
 - manufacturer specifications for required plant and equipment
 - site requirements
 - risk assessment and management
 - emergency response
 - communication techniques and equipment
 - job plan drafting and administration
 - quality management
 - relevant specifications
 - scheduling work activities
 - workplace reporting requirements, including:
 - briefings
 - handovers
 - work orders
 - toolbox meetings
 - site meetings
 - job reports
- principles and techniques for supervising installation of underground services using trenchless technology, including those relating to:
 - civil works construction sequencing
 - estimating
 - mentoring
 - performance monitoring
 - engineering surveying
 - set up and use of levelling devices techniques
 - drainage issues
 - workplace relationships

- construction offsets
- team leadership
- supervising and leading
- procedures for interpreting:
 - project site soil and geological data
 - soil and rock types
 - meteorological data
 - material properties and test results
 - project site geotechnical data
 - project site hydrological data
 - project engineering survey information
 - project plans and drawings
- quantities for the execution of tasks, including:
 - volumes
 - grades
 - percentages
 - areas
- resource consumption figures, including required supply rates trenchless technology underground service installation plant and equipment capabilities and application
- types, characteristics, technical capabilities and limitations of plant and equipment required to supervise the installation of underground services using trenchless technology
- relationships between various areas of civil works.
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Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - equipment required to supervise underground service installation using trenchless technology
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

• Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the RII implementation guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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