



Australian Government

RIICCM202 Identify, locate and protect underground services

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Modification History

Release	Comments
1	This unit of competency was first released in RII Resources and Infrastructure Industry Training Package Release 11.0.

Application

This unit describes the skills and knowledge required to identify, locate and protect underground services in civil construction.

It applies to those working in operational roles and overseeing construction work. They generally work under supervision and hold some responsibility for identifying, locating and protecting underground services.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite unit(s)

No pre-requisite units

Competency field(s)

N/A

Unit sector(s)

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. Required knowledge, skills and application should be considered and clearly articulated.</i>

1. Prepare to identify, locate and protect underground services	1.1 Access and use relevant safe work method statements (SWMS)/job safety analyses (JSA) or safe operating procedures in accordance with worksite and manufacturer requirements 1.2 Confirm task requirements with site personnel 1.3 Identify and address potential risk and hazards associated with task in accordance with work health and safety (WHS) requirements and worksite instructions 1.4 Select work methods for locating services that comply with project documentation, site requirements and relevant Australian standards 1.5 Select equipment and tools required for service locating works and check for faults and report or rectify within scope of own role in accordance with WHS requirements and worksite instructions 1.6 Identify and apply environmental protection requirements, including soil, water, vegetation, and waste management controls in accordance with applicable legislation, regulatory requirements and worksite instructions 1.7 Obtain and prepare information for search requirements from national referral service before making contact with service providers in accordance with worksite instructions 1.8 Contact relevant service and utility owners and confirm location details and specific requirements in accordance with service and utility owner requirements and worksite instructions 1.9 Wear designated personal protective equipment (PPE) prescribed in site signage and SWMS/JSA after checking its serviceability
2. Work safely in proximity to powerline infrastructure	2.1 Identify powerline infrastructure relevant to the worksite in accordance with applicable legislation, regulatory requirements and worksite instructions 2.2 Determine and apply minimum approach distances relevant to the work to be performed in accordance with applicable legislation, regulatory requirements and worksite instructions 2.3 Assess work to identify potential encroachment within minimum approach distances and implement required controls in accordance with applicable legislation, regulatory requirements and worksite instructions 2.4 Identify and implement risk control measures within scope of own authority in accordance with worksite safety planning

	document, applicable legislation, regulatory requirements and worksite instructions 2.5 Discuss safety observer role and responsibilities as per site requirements with relevant personnel including safety observer in accordance with site requirements
3. Identify and locate underground services	3.1 Locate and confirm the alignment, depth or level, and grade of services and utilities to the required accuracy in accordance with relevant Australian Standards, applicable legislation, regulatory requirements and worksite instructions 3.2 Comply with specific conditions or requirements provided by service and utility owners in accordance with own obligations 3.3 Inspect and confirm the presence of services before commencing excavation or construction in accordance with WHS requirements and worksite instructions 3.4 Detect and confirm the position of underground services using approved service locating equipment in accordance with WHS requirements and worksite instructions 3.5 Identify any assets affected by planned works in accordance with worksite instructions 3.6 Mark the confirmed positions of underground services and utilities clearly on the site in accordance with worksite instructions 3.7 Record and report service location results in accordance with worksite instructions
4. Protect underground services	4.1 Confirm clearance zones around underground services in accordance with relevant Australian Standards, WHS requirements, and applicable service owner requirements 4.2 Apply approved protection methods to prevent damage to identified services in accordance with relevant Australian Standards, WHS requirements, and applicable service owner requirements 4.3 Use non-destructive excavation methods when working near services in accordance with relevant Australian Standards, WHS requirements, and service owner requirements 4.4 Maintain separation between plant, equipment, and underground services through agreed controls in accordance with worksite instructions 4.5 Confirm reinstatement and backfilling of exposed services complies with service owner and/or road authority requirements in accordance with applicable legislation, regulatory requirements and worksite instructions

	4.6 Record and report service protection measures, incidents, or damage in line with site requirements, applicable legislation, regulatory requirements and worksite instructions 4.7 Respond appropriately to changing site conditions to maintain a safe working environment in accordance with WHS requirements and worksite instructions
5. Conduct housekeeping activities	5.1 Clear work area and dispose of and recycle materials as required in accordance with applicable legislation, regulatory requirements and worksite instructions 5.2 Clean, check and maintain condition of equipment, and report issues as required or address within scope of own role in accordance with WHS requirements and manufacturer instructions and/or worksite instructions 5.3 Finalise and process written records in accordance with site requirements and worksite instructions

Range of conditions

N/A

Assessment Requirements for RIICCM202 Identify, locate and protect underground services

Performance Evidence

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

- identify, locate and protect underground services on at least **two** occasions, including:
 - using electromagnetic locating equipment on at least **one** occasion to detect conductive underground services
 - working safely in proximity to powerline infrastructure

During the above, the candidate must:

- locate, apply and retain on site access to documentation, policies and procedures required to identify, locate and protect underground services
- implement the requirements, procedures and techniques for completing the identification, location and protection of underground services, including:
 - selecting and using required tools and equipment
 - communicating to clarify instructions and information
 - completing housekeeping activities
- work with others to identify, locate and protect underground services that meets required outcomes, including:
 - using a range of communication techniques and equipment
 - complying with written and verbal reporting requirements and procedures
 - employ required techniques, plant and equipment to search for services and utilities
 - identify services and owners of services and utilities.

Knowledge Evidence

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

- key indicators of work quality and accuracy
- processes for planning and organising work activities
- safety data sheets and materials handling methods
- electromagnetic locating and radar-based technologies
- requirements and procedures for selecting PPE, checking PPE serviceability, and ensuring correct fit

- job safety analyses (JSA), job safety environmental analyses (JSEA), and safe work method statements (SWMS)
- key risks relating to identifying, locating and protecting underground services, including those associated with:
 - traffic
 - live electrical services
 - confined spaces
 - falls
 - locating near other works in progress
 - manual handling
 - gas
- codes of practice or compliance codes and safe work practices for managing the risks of overhead power lines, including:
 - minimum approach distances
 - No Go Zones
 - safety observer's role and responsibilities and appropriate communication methods
 - impact of contact with the powerline infrastructure
- key policies and procedures, legislation and established requirements for identifying, locating and protecting underground services, including those for:
 - work health and safety (WHS)
 - environmental protection
 - operating and maintaining equipment
 - fault checking and calibrating locating equipment
 - marking underground asset locations
 - waste disposal and recycling
 - site isolation and traffic control
 - excavation and finished surfaces reinstatement
 - obtaining emergency numbers and contact details of service and utility owners
 - obtaining and preparing search requirement information from the national pre-excavation service
 - damage to services and utilities
- key factors affecting work activities described in performance evidence above, including:
 - types of services, utilities and providers
 - working in a road reserve

- equipment types, characteristics, technical capabilities and limitations
- asset specific clearance distances
- non-destructive excavation methods for exposing underground services.

Assessment Conditions

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

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

Assessor Requirements

In addition to the requirements in applicable vocational education and training legislation, frameworks and/or standards, assessors and industry experts must also have a minimum of two (2) years industry experience, directly relevant to the training and assessment being provided.

Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
RIICCM202E Identify, locate and protect underground services	Equivalent	Supersedes and is equivalent.

Links

Companion volumes, including implementation guides, are found on the national training register - <https://training.gov.au/training/details/RII>.