



Australian Government

Department of Education, Employment and Workplace Relations

AHCIRG204A Lay irrigation and/or drainage pipes

Release: 1

AHCIRG204A Lay irrigation and/or drainage pipes

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of laying irrigation and/or drainage pipes and defines the standard required to: set out and excavate trenches using manual equipment and a machine operator; check trench depth and grade; lay bedding materials; position irrigation and/or drainage of varying types and sizes; install pipe joints and fittings to job specification.
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Application of the Unit

Application of the unit	This unit applies to workers in irrigation enterprises or contracting businesses. The work is normally carried out with limited supervision and within enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare job	<p>1.1. Materials required for the job are transported to the location and stacked in a safe position.</p> <p>1.2. Tools, equipment and machinery are selected consistent with the requirements of the job.</p> <p>1.3. Quality Assurance requirements are recognised and adhered to.</p> <p>1.4. Personal Protective Equipment (PPE) is used and maintained according to procedures.</p> <p>1.5. Occupational Health and Safety (OHS) hazards are identified and safety concerns reported to the supervisor.</p>
2. Set out and excavate trenches	<p>2.1. Location and depths of trenches is determined from job drawings.</p> <p>2.2. Trench location is set out with pegs and string line and clearly marked with appropriate marking material.</p> <p>2.3. Manual support is provided to machine operator with excavation of trenches, shoring or battering in accordance with OHS requirements.</p> <p>2.4. Trenches are cleaned out by hand and corners left square.</p> <p>2.5. Trench depths and grades are checked for conformity to job requirements.</p>
3. Lower and position pipes	<p>3.1. Bedding materials are laid and consolidated to specified depths and grades.</p> <p>3.2. Pipes are installed/lowered into position with appropriate mechanical equipment according to specifications.</p> <p>3.3. Pipe joints and fittings are installed to job specification.</p> <p>3.4. Pipes are back filled to specifications and cover left level with surrounding ground.</p>
4. Clean up	<p>4.1. Site is cleared and excess soil, debris and unwanted materials removed in accordance with organisational procedures and environmental requirements.</p> <p>4.2. Tools and equipment are cleaned, maintained and stored.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify hazards and adopt safe work practices
- read and interpret scale drawings and specifications
- use hand signals for communicating with machine operator
- measure trench width, depth, grade and location
- lay and join irrigation pipe
- level cover with existing ground
- use power tools and hand tools
- handle materials safely
- work safely to instructions
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor
- use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities.

Required knowledge

- OHS requirements for excavating, filling trenches and laying pipes, including relevant legislation regulations and codes
- irrigation and/or drainage pipes, types and sizes
- hand and power tools and equipment
- bedding and backfill materials and handling methods
- scale drawings for laying irrigation and/or drainage pipes
- hand signals for communication
- OHS issues and procedures related to trenching and pipe laying
- Quality Assurance procedures for excavating, filling trenches and laying pipes
- environmental impacts and procedures for laying pipe.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • set out and excavate trenches using manual equipment and a machine operator • check trench depth and grade • lay bedding materials • position irrigation and/or drainage of varying types and sizes • install pipe joints and fittings to job specification.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Irrigation and drainage pipes may include:	<ul style="list-style-type: none"> • concrete • metal • polythene • polyvinylchloride (PVC) • the type and size of pipe will vary with the terrain, soil type and traffic load.
Fittings may include:	<ul style="list-style-type: none"> • valves • outlets • thrust blocks and connecting surfaces such as

RANGE STATEMENT	
	O-rings.
Mechanical equipment may include:	<ul style="list-style-type: none"> equipment for lowering irrigation and/or drainage pipes but does not include operating excavation machinery such as trench diggers or ditch witches.

Unit Sector(s)

Unit sector	Irrigation
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Co-requisite units

Co-requisite units	

Competency field

Competency field	
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