



Australian Government

Department of Education, Employment and Workplace Relations

RIICRC302A Place and form concrete kerb, channel and fixtures

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the placing and forming of concrete kerbs, channels and fixtures in the civil construction industry. It includes planning and preparing, setting out and preparing for construction/installation, forming kerb and barrier strips, pouring concrete to installed formwork, finishing kerbs, channels and fixtures, installing pre-cast concrete units, repairing kerb, gutters and median barrier strips, and cleaning up. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in an operational role at worksites within:

- Civil construction

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Access, interpret and apply compliance documentation relevant to the work activity 1.2. Obtain and confirm safety requirements from the site safety plan and organisational policies and procedures, and apply to the allotted task 1.3. Identify, obtain and implement signage requirements from the project traffic management plan 1.4. Select tools and equipment to carry out tasks consistent with the requirements of the job, check for serviceability and rectify or report any faults 1.5. Identify environmental protection requirements from the project environmental management plan, and confirm and apply to the allotted task
2. Set out and prepare for construction/ installation	2.1. Identify and protect existing services to prevent damage 2.2. Set out location of kerb, channel and/or fixtures to dimensions from drawings and specifications or to pre-set pegs 2.3. Set out driveways and other inverts 2.4. Check grades to ensure correct fall 2.5. Construct formwork and check to ensure compliance with specifications 2.6. Complete services and conduit preparation in accordance with relevant procedures
3. Form kerb and barrier strips	3.1. Maintain vertical and horizontal alignment during concrete placement 3.2. Place concrete accurately to string line 3.3. Maintain concrete to specified standard 3.4. Mix and apply mortar at quality and quantity to achieve specified finish
4. Pour concrete to installed formwork	4.1. Place and compact concrete into formwork 4.2. Finish surface to alignment specifications 4.3. Remove face formwork without damage to concrete following concrete set
5. Finish kerbs, channels and	5.1. Finish job to shape in accordance with

fixtures	<p>specifications or to the relevant Australian standard</p> <p>5.2. Finish concrete to specified quality and texture</p> <p>5.3. Position expansion, construction and dowel joints to specification</p> <p>5.4. Cure and protect finished work during process</p>
6. Install pre-cast concrete units	<p>6.1. Prepare base section and finish to specification for pre-cast unit installation</p> <p>6.2. Install and join pre-cast concrete units</p>
7. Repair kerb, gutters and median, barrier strips	<p>7.1. Identify damaged areas, assess repair requirements and carefully remove or repair damaged section</p> <p>7.2. Set up formwork or slip form machine and use to replace removed section</p> <p>7.3. Place concrete accurately to correct alignment using concrete to the specified mix</p> <p>7.4. Finish concrete to specification matching the shape of the kerb or gutter in place</p> <p>7.5. Clear, backfill and finish area</p>
8. Clean up	<p>8.1. Clear work area and dispose of or recycle <i>materials</i> in accordance with project environmental management plan</p> <p>8.2. Clean, maintain, check and store tools and equipment</p>

Required Skills and Knowledge

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

Required skills

Specific skills are required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following, as required to replace and form concrete kerb, channels and fixtures:

- apply legislative, organisation and site requirements and procedures for replacing and forming concrete kerb, channels and fixtures
- organise work activities
- select and use relevant tools and equipment safely
- identify and report on hazards related to the worksite and work activity
- communicate effectively to receive and clarify work instructions

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following, as required to replace and form concrete kerb, channels and fixtures:

- curbing profiles
- channelling and fixtures profiles and structural features
- concrete properties including the effects of weathering
- concreting and related formwork techniques
- concrete curing techniques
- types, characteristics, uses and limitations of forming machines
- the types of services and related conduit requirements
- site and equipment safety requirements
- processes for interpreting engineering drawings and sketches
- site isolation and traffic control responsibilities and authorities
- materials safety data sheets and materials handling methods
- project quality requirements
- civil construction terminology
- set out techniques
- JSAs/safe work method statement

Evidence Guide

<p>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.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for placing and forming concrete kerbs, channels and fixtures • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of placing and forming concrete kerbs, channels and fixtures • working with others to undertake and complete the placing and forming of concrete kerbs, channels and fixtures that meets all of the required outcomes • consistent timely completion of concrete kerb, channel and fixture placement and forming that safely, effectively and efficiently meets the required outcomes
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in a resources and infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of

	<p>assessment should not be greater than those required on the job.</p> <ul style="list-style-type: none"> • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete the placing and forming of concrete kerbs, channels and fixtures
Guidance information for assessment	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> • legislative, organisational and site requirements and procedures • drawings and specifications • manufacturer's guidelines and specifications • Australian standards • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
<p>Safety requirements may include:</p>	<ul style="list-style-type: none"> • OHS requirements in accordance with state or territory legislation and regulations, organisational safety policies and procedures, and project safety plan, including protective clothing and equipment, use of tools and equipment, workplace environment and safety, handling of materials, use of fire fighting equipment, use of First Aid equipment, hazard control and hazardous materials and substances • safe operating procedures including recognising and preventing hazards associated with high voltage power lines, uneven/unstable terrain, trees, overhead service lines, bridges, surrounding buildings, obstructions, structures, facilities, dangerous materials, recently filled trenches, other machines, personnel, traffic control, working at heights, working in proximity to others, worksite visitors and the public • safe parking practices including ensuring access ways are clear, equipment/machinery is away from overhangs and refuelling sites, safe distances are kept from excavations, and areas secured from unauthorised access or movement • recognising hazards and risks including uneven/unstable terrain, trees, fires, overhead and underground services, bridges, buildings, excavations, traffic, embankments, cuttings, structures and hazardous materials

	<ul style="list-style-type: none"> • emergency procedures related to equipment operation including emergency shutdown and stopping, extinguishing equipment fires, organisational First Aid requirements and evacuation
Site locations may include:	<ul style="list-style-type: none"> • formed/prepared roads • access roads • pads • car parks • estates
Tools may include:	<ul style="list-style-type: none"> • shovels • rakes • trowels • forming tools • string lines and levels • concrete mixers • barrows • form machine • dumpy • laser levels
Environmental protection requirements may include:	<ul style="list-style-type: none"> • organisational/project environmental management plan • waste management • water quality protection • noise • vibration • dust and clean-up management
Kerb, channel and/or fixtures may include:	<ul style="list-style-type: none"> • gutters • median and barrier strips • driveways • inverts
Drawings may include:	<ul style="list-style-type: none"> • site plans • cross-sectional plans • structural detail for kerbs • channels • fixtures
Services and conduits may include:	<ul style="list-style-type: none"> • power • gas • water • telecommunications • sub-soil drainage

Materials may include:	<ul style="list-style-type: none">• concrete and concrete reinforcing materials• formwork materials• conduit and tubing
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Unit Sector(s)

Road and Pavements Construction and Maintenance (General)

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.