



Australian Government

CPCCCA3030 Construct, erect and dismantle formwork for stairs and ramps

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Modification History

Release	Comments
1	This unit of competency was first released in CPC Construction, Plumbing and Services Training Package Release 11.0.

Application

This unit of competency specifies the skills and knowledge required to construct, erect and dismantle formwork for stairs and ramps to provide access between floors and landings, meeting all relevant requirements of the building standards described in Commonwealth and state or territory legislation, codes and Australian Standards.

It includes:

- establishing required levels on site
- constructing timber or metal formwork to contain wet poured concrete
- dismantling the formwork
- preparing and storing formwork for re-use.

Licensing/Regulatory Information

Completion of the general construction induction training required by applicable work health and safety (WHS) legislation is mandatory for any person carrying out construction work. Achievement of the current unit of competency that covers general construction induction training meets this requirement.

Pre-requisite unit(s)

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry

Competency field(s)

N/A

Unit sector(s)

Carpentry and Joinery

Elements and Performance Criteria

Elements <i>Elements describe the essential outcomes.</i>	Performance criteria <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. Plan and prepare	1.1 Obtain relevant safe working procedures (safe work method statement [SWMS] or job safety analyses [JSA] or their equivalent) 1.2 Confirm work requirements, sequence of activities and interfaces with other trades with relevant site personnel in accordance with site procedures 1.3 Identify hazards and assess risks associated with the task and implement or escalate control measures within the scope of own authority in accordance with site requirements 1.4 Wear personal protective equipment (PPE) prescribed in site signage and SWMS/JSA after checking its serviceability in accordance with site procedures 1.5 Select tools and equipment for the task and check serviceability in accordance with manufacturer and site requirements 1.6 Determine required quantities of materials and fasteners and position materials safely and accessibly to support planned work operations in accordance with site requirements 1.7 Verify services have been identified and confirm that controls are in place when operating near services
2. Prepare to erect formwork	2.1 Identify the stair or ramp location from plans, drawings or site instructions in accordance with site requirements 2.2 Determine the required rise, going and pitch of the stairs or ramp from drawings, specifications and site measurements, and confirm compliance with applicable building standards described in Commonwealth and state or territory legislation, codes and Australian Standards 2.3 Check rise and run against applicable Australian Standards or recognised industry guidance and adjust the set-out, within the scope of own authority, to achieve compliance 2.4 Set out formwork materials, including stringers, to the required pitch, rise and run in accordance with Australian Standards or recognised industry guidance, ensuring riser spacing does not exceed specified limits
3. Assemble and erect formwork	3.1 Place, fix and brace bearers, joists and sheeting to form the stair or ramp soffit in accordance with the site plan and site requirements

	3.2 Cut, install and brace formwork for stringers in accordance with the set-out and site requirements to achieve required alignment and stability 3.3 Set out, cut square to length and fix materials to form the face of risers, where required, in accordance with the approved set-out and site requirements 3.4 Brace risers to prevent deflection under the load of wet concrete in accordance with site requirements
4. Strip formwork	4.1 Strip/dismantle formwork and bracing sequentially and safely 4.2 Check formwork for reusability and dispose of damaged components in accordance with site requirements
5. Clean up	5.1 Store and stack reusable formwork materials safely in accordance with site requirements 5.2 Check serviceability of tools and equipment and store serviceable items in accordance with site requirements 5.3 Tag out defective tools and equipment and arrange repair or disposal in accordance with site requirements

Range of conditions

N/A

Assessment Requirements for CPCCCA3030 Construct, erect and dismantle formwork for stairs and ramps

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by constructing, erecting, stripping and dismantling the formwork for:

- one flight of stairs, freestanding or against a wall with a minimum rise of 1800 mm, and
- one ramp with a minimum rise of 400 mm.

In the course of the above, the candidate must also:

- interpret site plans, drawings and specifications relating to stair and ramp formwork
- prepare for work by confirming work requirements, reviewing SWMS/JSA, identifying hazards and applying required controls
- select, check and correctly use personal protective equipment (PPE) in accordance with site requirements
- select, check and use tools and equipment required to erect and dismantle formwork
- set out rise, going and pitch for stairs and ramps in accordance with applicable standards
- set out, assemble, fix and brace stair and ramp formwork to achieve required alignment and stability
- check and maintain line, level and plumb of formwork components during erection
- inspect stripped formwork components for damage and reusability and segregate damaged components
- tag out and/or dispose of damaged components, defective tools and equipment and store serviceable tools and equipment in accordance with site requirements
- safely stack and store reusable formwork elements and dispose of damaged formwork components safely.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- legislation, building standards and codes applicable to stair and ramp construction, including requirements for:
 - rise
 - going
 - gradient
 - landing requirements

- work health and safety (WHS) regulations, codes of practice and compliance requirements relevant to formwork activities, including hazard identification and risk controls
- types of formwork relevant to stairs and ramps
- tools and equipment used for erecting and dismantling formwork
- common formwork components used for stairs and ramps
- formwork techniques, including:
 - measuring and setting out
 - fixing and fastening methods
 - edge forms and boxing
 - block-outs, rebates and cast-in items
 - interfaces with reinforcement
 - inspection requirements prior to stripping
- common faults, including:
 - misaligned pitch or incorrect rise/run
 - out-of-plumb forms
 - gaps/leakage at joints
 - inadequate bracing
 - damaged components
 - suitable methods to re-align, re-brace, reseal, replace or adjust formwork prior to pour
- emergency response procedures relevant to formwork operations, including response to:
 - formwork collapse or instability
 - entrapment or injury during pours and stripping
 - contact with underground or overhead services.

Assessment Conditions

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

- include access to:
 - personal protective equipment (PPE)
 - equipment required to construct, erect and dismantle formwork for stairs and ramps
- be conducted in a safe environment; and,

- confirm consistent performance can be applied in a range of relevant workplace circumstances.

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
CPCCCA3018 Construct, erect and dismantle formwork for stairs and ramps	Equivalent	Clarification provided to text and workflow without changing the job outcome or competency requirements.

Links

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