Australian Government

Department of Education, Employment and Workplace Relations

CPCCJS3003A Assemble and install stairs

Release: 1

CPCCJS3003A Assemble and install stairs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit specifies the outcomes required to assemble prepared components required for the assembly and installation of a timber stair to location.

Application of the Unit

Application of the unit This unit of competency supports the achievement of skills and knowledge required to assemble stair components and install all types of timber stair construction, which may include working with others and as a member of a team.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units

CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare.	1.1. Work instructions and operational details are obtained using relevant ***information***, confirmed and applied for ***planning and preparation*** purposes. 1.2. ***Safety*** (***OHS***) requirements are followed in accordance with safety plans and policies. 1.3. Signage and barricade requirements are identified and implemented. 1.4. ***Tools and equipment*** selected to carry out tasks are consistent with job requirements, checked for serviceability and any faults are rectified or reported prior to commencement. 1.5. Material quantity requirements are calculated in accordance with plans, specifications and ***quality requirements***. 1.6. ***Materials*** appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use. 1.7. ***Environmental requirements*** are identified for the project in accordance with environmental plans and ***statutory and regulatory authority*** requirements, and are applied.
2. Select and prepare materials and components.	2.1. Methods of assembling erected stairs are identified and ***components*** checked for appropriate locations in stair structure. 2.2. Method of assembling and ***fixing*** are determined in accordance with stair design and location.
3. Assemble strings and newels.	3.1. Specific position for stairs is identified, measurements are checked and adjustments made where applicable. 3.2. Strings and newels are assembled to design and fixed to specification. 3.3. Strings to be fixed to walls are temporarily supported or directly fixed in position to specification.
4. Install treads and risers.	4.1. Assembled strings and newels are temporarily braced in vertical position. 4.2. Treads and risers about newels are fitted and fixed to assembly and flight is checked for true and square. 4.3. Intermediate treads and risers are fitted and wedged where applicable to fit tight to housings to specification.

ELEMENT	PERFORMANCE CRITERIA
5. Assemble and install landings.	5.1. Bearers, where applicable, and joists are fitted and fixed to level according to fixing specification. 5.2. Nosing and flooring are fitted and fixed to form landing to specified finish and fascia is fitted and fixed to landing according to finish specification.
6. Install handrail and balustrade.	6.1. Balusters/intermediate railing and handrails are fitted to form stair balustrade according to specification, with balusters checked to ensure plumb fit. 6.2. Newels are checked prior to final fixing to ensure plumb fit. 6.3. Handrailings are fitted and fixed to wall in accordance with specifications.
7. Install spiral stair and curved strings.	7.1. Location of stair and first step is accurately marked on floor and central post is erected into true position, fixed at floor and temporarily braced at top. 7.2. Initial string section is temporarily supported in place for assembly, and treads and risers are fitted and fixed into position to specification. 7.3. Stair is progressively developed with the extending, supporting and fixing of curved string, and completed with head secured to floor/landing, balustrade ***installed*** and central post fixed to specifications.
8. Secure stair to structure and line spandril area.	8.1. Securing of stair to building is carried out during/on completion of assembly. 8.2. Spandril, where applicable, is framed, lined and fixed out to specified finish.
9. Clean up.	9.1. Stair is checked, with marks removed and surfaces left to specified finish. 9.2. Area is cleared and waste material removed. 9.3. Glue blocks are fitted to treads and risers according to specified locations. 9.4. Tools and equipment are cleaned, maintained and stored.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills for this unit are:

- ability to recognise procedures, respond to change and contribute to workplace responsibilities, such as current work site environmental or sustainability frameworks or management systems
- communication skills to:
  - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
  - follow instructions
  - read and interpret drawings and specifications
  - use and interpret non-verbal communication
  - use language and concepts appropriate to cultural differences
- innovation skills to select appropriate tools and equipment, respond to workplace challenges and put ideas into action
- numeracy skills to apply calculations
- planning and organisational skills to identify requirements, apply relevant resources and sequence tasks
- problem solving skills to recognise and take action to rectify minor faults and problems
- teamwork skills to be able to work with others to action tasks and relate to people from a range of cultural, social, ethnic backgrounds and with varying physical and mental abilities.

Required knowledge

Required knowledge for this unit is:

- adhesives, fixings and fasteners related to stair construction
- assembling procedures for stairs
- interpretation of drawings and specifications
- job safety analysis (JSA) and safe work method statements
- levelling techniques
- materials and their characteristics, relevant to stair construction
- marking of components
- materials identification
- measuring and setting out related to assembling and installing stairs
- organisation's quality assurance requirements
- stair construction and joining methods
- types of stairs
- workplace and equipment safety requirements.

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

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to assemble and install a complete stair that includes flight and landing balustrades, providing evidence of the ability to:

- comply with OHS regulations applicable to workplace operations
- apply organisational quality procedures and processes within the context of assembling and installing timber stairs
- identify correct location, design of stair and method of attaching and securing to structure
- identify delivered components, materials and assembly diagram, if applicable
- accurately set out stair location and check levels for adjustments on newels
- select and use appropriate processes, tools and equipment to assemble stair components
- demonstrate safe and effective procedures in assembling strings and newels and installing landing bearers and joists
- select and use safe and efficient procedures in installing treads, risers, flooring and nosing
- adopt and use appropriate techniques to fit and fix balustrades
- complete installation with stair true to plumb and level, and fixed securely to structure with surfaces finished free of marks

EVIDENCE GUIDE

	• adopt safe and effective handling procedures for movement and placement of material and components • identify typical faults and problems that occur and action required to rectify them • communicate with others to ensure safe and effective stair installation.
Context of and specific resources for assessment	This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints. Assessment of essential underpinning knowledge will usually be conducted in an off-site context. Assessment is to comply with relevant regulatory or Australian standards' requirements. Resource implications for assessment include: • site location for stair installation • stair components, accessory materials and fixings and fasteners • tools and equipment appropriate for activity • drawings, specifications and documentation relevant to the installation. Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.
Method of assessment	Assessment methods must: • satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package • include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application • reinforce the integration of employability skills with workplace tasks and job roles • confirm a reasonable inference that competency is not only verified under the particular assessment circumstance, but is able

EVIDENCE GUIDE

to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should, as far as is practical, take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

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.

Information includes:

- diagrams or sketches

RANGE STATEMENT

- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions, where specified
- material safety data sheets (MSDS)
- memos
- regulatory and legislative requirements pertaining to assembling and installing stairs
- relevant Australian standards
- safe work procedures relating to assembling and installing stairs
- signage
- verbal, written and graphical instructions
- work bulletins
- work schedules, plans and specifications.

Planning and preparation include:

- assessment of conditions and hazards
- determination of work requirements and safety plans and policies
- equipment defect identification
- work site inspection.

Safety (***OHS***) is to be in accordance with state and territory legislation and regulations and project safety plan and may include:

- emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation
- hazard control
- hazardous materials and substances
- organisational first aid
- PPE prescribed under legislation, regulations and workplace policies and practices
- safe operating procedures, including the conduct of operational risk assessment and treatments associated with:
  - concealed services (water, power and gas)
  - lighting
  - restricted access barriers
  - traffic control
  - work site visitors and the public
  - working at heights
  - working in confined spaces
  - working in proximity to others
  - working platforms
- use of firefighting equipment
- use of tools and equipment

RANGE STATEMENT

- workplace environmental requirements and safety.

Tools and equipment include:

- air compressor and hoses
- chisels
- clamps
- hammers
- hand saws
- measuring tapes and rules
- nail guns
- power drills
- power leads
- power planers
- power saws
- saw stools
- screwdrivers
- set spanners
- spirit levels
- squares.

Quality requirements include:

- control of handling procedures
- procedures for installing and finishing
- quality of materials
- relevant regulations, including:
  - Australian standards
  - internal company quality policy and standards
  - manufacturer specifications where specified
  - workplace operations and procedures
- use and maintenance of equipment
- workplace operations and procedures.

Materials include:

- medium density fibreboard (MDF)
- plastics
- plywood
- steel
- timber.

Environmental requirements include:

- clean-up management
- dust and noise
- stormwater protection
- waste management.

Statutory and regulatory authority includes:

- federal, state and local authorities administering applicable Acts, regulations and codes of practice.

RANGE STATEMENT

Components include:	• balusters • flooring • handrailing • landing bearers • landing joists • newels • nosing • risers • strings • treads.
Fixing includes:	• bolts and nuts • glue and wedging • glue blocks • handrail bolts • nailing • screws, including coach screws.
Installed stairs may involve:	• a piece by piece assembly on location, for example with a stair between two full height walls to allow for flights to be preassembled and lifted and fitted into place as part of a complete stair.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area