

CPCBC4014A: Prepare simple building sketches and drawings

Description

This unit of competency specifies the outcomes required to produce sketches and drawings. The sketches may be used to clarify or communicate ideas to clients or other parties. They may also be simplified versions taken from architectural drawings, designed to capture design concepts or options. The sketches may be used for estimating purposes and to show measurements and other requirements for building and construction works. This unit does not describe more complex drafting skills.

Employability Skills

This unit contains employability skills.

Application Of Unit

This unit of competency supports the needs of builders, experienced tradespersons, project managers and estimators with a responsibility for preparing sketches and drawings.

Unit Sector

Construction

Performance criteria

Element	Performance criteria
Prepare to make 1. sketches and drawings.	<p>1.1 Types of drawings required and key features to be recorded are identified in compliance with the scope and standard of the job being undertaken .</p> <p>1.2 OHS requirements on site are identified and followed.</p> <p>1.3 Tools and equipment required for inspection and measurement and for producing drawings are gathered and checked for serviceability.</p>
Create simple 2. sketches and drawings.	<p>2.1 Inspection of relevant area is carried out as required and measurements are taken and recorded.</p> <p>2.2 Simple two and three-dimensional sketches and drawings are created using standard drawing conventions and incorporating relevant codes and standards .</p> <p>2.3 Sectional drawings of simple structural elements are created using standard drawing conventions.</p>
Notate and 3. process drawings.	<p>3.1 Essential information is recorded on the drawing with symbols and abbreviations according to standard drawing conventions.</p>

3.2 Drawings are labelled, dated and processed according to organisational administration and quality procedures.

Skills and Knowledge

Required skills

Required skills for this unit are:

- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
- drawing techniques
- interpret and apply relevant standards and codes
- numeracy skills to apply measurements and calculations.

Required knowledge

Required knowledge for this unit is:

- drawing conventions and features, including direction, scale, key, contours, symbols and abbreviations
- requirements of the relevant codes, standards, statutory and authority requirements
- safe work methods.

Range statement

Types of drawings required include:

- floor plan
- land boundaries and footprint of building
- orthographic drawings
- schematic drawings of wiring and pipe work
- sectional views.

Key features to be recorded may include:

- ceiling heights and variations
- doors
- light fittings and power supplies
- services
- wall penetrations
- walls.

OHS requirements include:

- detailing appropriate installation of scaffolding
- detailing power supplies
- details of all services
- understanding hazards located in the area
- use of personal protective equipment.

Tools and equipment
include:

- recording devices, including:
 - computer
 - digital camera
 - pen and paper.

Standard drawing conventions include:

- standard design symbols common to the building and construction industries.

Evidence guide

This unit of competency could be assessed by creating a set of sketches and drawings for a small work project in the relevant field of expertise.

Overview of assessment

Measurements of components, sub-assemblies, products, models, equipment, layouts or facilities needed for the preparation of the required drawings and calculations of required dimensions and other drafting details based on the measurements and other relevant information should be made and recorded.

This unit of competency can 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.

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

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

- produce clear and effective drawings and sketches with appropriate notations and labelling
- apply appropriate techniques for making inspections and taking measurements
- make good incursions into the fabric of a building
- comply with OHS regulations applicable to workplace operations
- apply organisational quality procedures and processes
- select and use appropriate processes, tools and equipment.

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 access to:

- an appropriate work site
- appropriate documentation and data related to tasks
- scaffolding and fall protection equipment
- tools and equipment relevant to activity process.

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.

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Integrated Framework 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 that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- Method of assessment**
- competency will need to be demonstrated over a period of time reflecting the scope of the role and the 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.