



Australian Government

Department of Education, Employment and Workplace Relations

CPCCBBC4012A Read and interpret plans and specifications

Release: 1

CPCCB4012A Read and interpret plans and specifications

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to read and interpret plans and specifications applicable to medium rise residential and commercial projects in order to inform estimation, planning and supervisory activities.

Application of the Unit

Application of the unit This unit of competency supports the needs of site managers, forepersons, estimators, builders, managers and other building and construction industry personnel responsible for ensuring the currency of plans and specifications and for reading and interpreting these for application to estimation, planning and related supervisory activities.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

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. Identify types of drawings and their purposes.	1.1. Purpose and advantage of different types of drawings are identified. 1.2. Different aspects of drawings are identified.
2. Apply commonly used symbols and abbreviations.	2.1. Commonly used symbols and abbreviations on drawings are identified, understood and applied. 2.2. Common building and construction terms used on drawings are identified, understood and applied.
3. Locate and identify key features on a site plan.	3.1. Building site is identified from location drawings. 3.2. True north and building orientation are identified from details provided on site plan. 3.3. Key features of site plan are identified.
4. Identify and locate key features on drawings.	4.1. Key features of plans, elevations and sections are identified. 4.2. Client requested variations to standard plans are identified on drawings.
5. Correctly read and interpret specifications.	5.1. Provisional sum (PS) and prime cost (PC) values are identified and correctly applied. 5.2. Customer variations to standard specifications are identified. 5.3. Correct interpretations of essential elements are applied to estimation, planning and supervisory tasks and are communicated. 5.4. Building codes or standards affecting the work to be undertaken are identified, including references to Australian standards and the Building Code of Australia (BCA).
6. Identify non-structural aspects to the specification.	6.1. Key features of products included in the specification are identified, including the design, purpose, aesthetics and cost relationships.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

REQUIRED SKILLS AND KNOWLEDGE

Required skills for this unit are:

- communication skills to:
 - consult with industry professionals
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - interact effectively by telephone, facsimile, email and in writing with clients, organisational personnel and appropriate local authorities
 - read and interpret:
 - tender documentation
 - other relevant workplace documentation
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
 - written communication skills to produce required documentation
- identify and analyse relevant information
- numeracy skills to calculate labour hours and costs and material quantities and costs
- translation of documented requirements into on-site activities and site and structural features from two-dimensional to three-dimensional formats.

Required knowledge

Required knowledge for this unit is:

- building and construction practices
- internal documentation systems
- regulatory approvals processes and timeframes
- relevant state or territory building and construction codes, standards and regulations
- types of building and construction drawings and drawing perspectives
- types of building and construction industry contracts.

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 by correctly interpreting a range of plans and

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specifications for activities relating to medium rise residential and commercial construction projects.

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.

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 provide evidence of the ability to:

- read and interpret plans and specifications including identification of key features, levels, contours, sections, service entry points, site features to be removed or retained and other details pertinent to the construction process
- identify the characteristics and features of sites and structures pertinent to a construction project, including:
 - determine correct orientation of structures on site
 - establish location of key on-site features in relation to building or other structures
- identify and incorporate customer variations to agreed plans and specifications
- correctly interpret essential elements and apply these to estimation, planning and supervisory tasks
- effectively communicate specification changes to organisational personnel and confirm variations with the client.

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:

- documentation that should normally be available in either a building or construction

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office

- relevant codes, standards and government regulations
- office equipment, including calculators, photocopiers and telephone systems
- computers with appropriate software to view 2-D CAD drawings, run costing programs and print copies
- technical reference library with current publications on measurement, design, building construction and manufacturer's product literature
- suitable work area appropriate to the construction 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.

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 that competency is verified and able 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 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

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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.

Types of drawings include:

- CAD drawings
- construction information
- detailed amendment drawings
- details of:
 - roads and pathways
 - parking areas
 - boundaries and landscaping
- initial sketches
- preliminary and final drawings and plans
- presentation drawings

RANGE STATEMENT

- Aspects of drawings** include:
- service details, such as:
 - wiring
 - piping
 - ducts and waste disposal
 - sketch plans
 - working drawings.
- Key features of site plan** include:
- elevations
 - plans
 - sections
 - views in isometric projection and perspective.
- Specification** includes:
- access and egress
 - contours and slopes
 - drainage lines
 - easements
 - existing dwellings, buildings or other structures
 - location and situation
 - major geological and topographical features
 - paving
 - retaining walls
 - service connection points
 - set backs
 - stormwater disposal
 - trees and vegetation.
- Specification** includes:
- levels and survey information
 - materials lists
 - performance data and material technical data
 - schedules of quantities
 - stress, load and bearing calculations.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area