



Australian Government

CPPBDN4013 Produce construction detail drawings

Release: 1

CPPBDN4013 Produce construction detail drawings

Modification History

Release 1. New unit.

This version first released with CPP Property Services Training Package Version 1.

Application

This unit of competency specifies the outcomes required to produce construction detail drawings and specifications for all types of residential, commercial and industrial buildings as defined by the Building Code of Australia (BCA). Construction detail drawings will provide construction contractors with information required to select, cost and apply construction materials and methods according to the client's design brief and relevant development approvals.

It also covers the production of drawings where variations are required during the construction process.

The unit supports drafters who assist and work under the instruction and supervision of an architect or building designer to produce drawings relied upon throughout the various construction phases of a building development.

Licensing, legislative, regulatory or certification requirements apply to building design drafting in some states. Relevant state and territory regulatory authorities should be consulted to confirm those requirements.

Pre-requisite Unit

Nil

Competency Field

Drafting

Unit Sector

Building design

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.

1. Gather and interpret project

1.1. Current ***documentation*** and project information are reviewed to identify components of drawings requiring

information.		construction detail and scope of detail drawings required.
	1.2.	Approved changes in building design requirements that have occurred since approval to build was received are identified and their impact on existing documentation is confirmed with architect or building designer.
	1.3.	Client specifications for materials, systems and fixtures are determined and clarified throughout the detail drawing process.
	1.4.	Research into relevant materials, systems and fixtures is undertaken and noted for application to construction detail drawings.
2.	Prepare for production of construction detail drawings.	2.1. Digital files are set up and prepared according to workplace procedures.
	2.2.	Amendments to original working drawings are made where required, to reflect agreed changes to the building project.
	2.3.	Design methodology for areas and <i>elements of the building</i> to be drawn in detail are confirmed in consultation with architect or building designer.
	2.4.	Specific requirements for construction detail drawings are confirmed based on marked-up drawings received from architect or building designer.
3.	Create initial construction views and details.	3.1. Existing library of objects is reviewed and relevant objects are imported and manipulated where appropriate for the production of construction detail drawings.
	3.2.	Views of building elements are created according to requirements for the production of construction detail drawings.
	3.3.	Callouts are used or created as necessary to show required detail in plans.
	3.4.	Initial detail construction drawings and specifications are produced and submitted to the architect or building designer for feedback.
4.	Modify and update detail drawings.	4.1. Modifications to construction detail drawings are undertaken in response to architect or building designer feedback and instructions.

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| | 4.2. | Final construction detail drawings are provided to client and construction practitioners as directed and in an approved format. | |
| | 4.3. | Approved variations to drawings received during construction are actioned and revised drawings are submitted to architect or building designer for sign-off. | |
| 5. | Finalise construction detail drawing. | 5.1. | Design personnel are consulted to ensure iterations of the construction detail drawings adhere to project design brief. |
| | | 5.2. | Builder and other construction personnel are consulted where necessary to confirm construction methodologies and to inform finalisation of construction detail drawings. |
| | | 5.3. | External consultant's documentation and expertise are sought as directed to ensure accuracy of drawings. |
| | | 5.4. | Relevant approval authorities are consulted as required to undertake final cross-checking and confirmation of approval conditions and to resolve unforeseen conflicts. |

Foundation Skills

This section describes core skills that are essential to performance and not explicit in the performance criteria. Employment skills essential to performance are explicit in the performance criteria of this unit of competency.

Skill	Performance feature
Learning skills to:	• assess nature and scope of construction detail drawings required across a range of different building types • independently access a range of information and resources to support the production of construction detail drawings required.
Numeracy skills to:	• interpret and convert ratios and scales on drawings • use and apply knowledge about space and shape when drawing accurate two-dimensional (2-D) and three-dimensional (3-D) scale plans and construction detail drawings.
Oral communication skills to:	• liaise with external consultants regarding interpretation of specialist documentation and plans • discuss required modifications to drawings with architect or building designer using construction and design terminology.

- Reading skills to:
- interpret margin notes on plans, drawings and simple diagrams.
- Writing skills to:
- represent technical information in notations using language suitable for clients with no technical knowledge.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

- Documentation** must include:
- building plans and permits, including:
 - approval conditions
 - comments and notations on drawings
 - services related approvals
 - 2-D and 3-D digital design drawings and models.
- Elements of the building*** must include one or more of:
- architraves
 - balustrades
 - box gutters
 - ceiling finishes
 - connections between floor and wall and wall and ceiling
 - doors, including trims
 - flashings
 - kitchen or bathroom interior, including wall finishes, fixtures, fittings
 - parapets
 - roof details, including fascias
 - skirting boards
 - stair construction details
 - timber reveals
 - vermin proofing
 - wall design
 - windows, including trims and rebates.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPBDN4013 Produce construction detail drawings

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Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit, and must be able to provide evidence of the ability to produce construction detail drawings under the supervision and instruction of an architect or building designer for the following three building design projects, as defined in the Building Code of Australia (BCA). At least one of the building design projects must include a Class 10 component:

- one Class 1 building
- one Class 2 building
- one building selected from Classes 3 to 9.

At least one of the above building projects must be two storeys and one must be three storeys or more.

For each of the building design projects, the person must provide evidence of:

- producing three construction detail drawings in 1:20 or 1:10 scale for elements of the building required by the building design project as listed in the range of conditions
- applying drawing conventions according to:
 - AS1100.101 Technical drawing - General principles
 - AS1100.301 Technical drawing - Architectural drawing
 - current industry best practice
- making at least one modification to the construction detail drawings in response to feedback received from client, architect or building designer or other relevant specialist consultant.

Knowledge Evidence

A person demonstrating competency in this unit must be able to demonstrate knowledge of the following, as they relate to the three classes and types of building projects specified in the performance evidence:

- construction terminology required to discuss construction detail drawings with colleagues, architect or building designer and specialist external consultants
- current industry drawing standards and conventions appropriate to the production of construction detail drawings, including:

- appropriate use of dimensions, scale, layout, white space and notations on drawings to ensure ease of interpretation by client and others
- current Australian standards relating to drawings
- functions of building information modelling (BIM)-capable building design software used for producing construction detail drawings
- line styles and conventions used in technical and detail drawings for construction purposes
- principles of architectural conventions used in detail drawings
- types of drawings, documentation and models required for client consultations regarding construction detail drawings
- methods of construction, including the sequencing of construction work and potential challenges experienced onsite during construction
- principles and qualities of construction materials used in the range of building classes and types.

Assessment Conditions

Assessment must be conducted in the workplace or a close simulation of the workplace.

Suitable assessment of performance requires:

- equipment:
 - computer with internet access, BIM-capable building design software and business software currently used in drafting, architectural and building design practices
 - telephone
- materials – access to:
 - building design plans and drawings for building design plans and drawings for building projects specified in the performance evidence
 - legislation, regulations, codes, standards and other relevant compliance documentation relating to each building design project specified in the performance evidence
 - reports from technical experts
 - working drawings and plans
- specifications – access to:
 - technical drawings and plans
 - client design brief
- relationships with team members and supervisor:
 - tasks may be completed individually but may rely on information sourced from team members and supervisor as relevant to the task.

Assessor requirements

As a minimum, assessors must satisfy SNR/AQTF assessor requirements.

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