



Australian Government

CPCCCM3005 Calculate costs of construction work

Release: 1

CPCCCM3005 Calculate costs of construction work

Modification History

Release 1.

This version first released with CPC Construction, Plumbing and Services Training Package Version 2.

Revised unit of competency. Replaces superseded equivalent unit CPCCCM2003B Calculate and cost construction work.

Application

This unit of competency specifies the outcomes required to estimate materials, overheads, labour and time requirements and establish costs for the provision of products and services for construction work.

The unit supports tradespersons and those in independent construction job roles to cost a construction project or part of a construction project. It applies to construction work on residential and commercial sites.

No licensing, legislative, regulatory, or certification requirements apply to this unit of competency at the time of endorsement.

Pre-requisite Unit

Nil

Competency Field

Common

Unit Sector

Construction

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 information.

1.1. Job requirements are determined through discussion with customer or from information supplied.

1.2. ***Plans and specifications*** are accessed and site is

- inspected to confirm requirements.
- 1.3. Details of products and services to be provided are developed and checked for availability and fitness for purpose.
 - 1.4. Delivery point and methods of transportation are determined where necessary.
 - 1.5. Details of job tasks are accurately recorded and checked according to workplace procedures.
 - 1.6. Information about material, labour and overhead costs is obtained and checked to be current and accurate.
2. Estimate materials, labour and time.
- 2.1. Work, including preparatory tasks, is planned and sequenced to cover all necessary activity.
 - 2.2. **Types and quantities of materials** required for work are estimated based on availability, fitness for purpose, and current costs.
 - 2.3. Labour requirements to perform work tasks and complete the job are estimated.
 - 2.4. Time requirements to perform work tasks are accurately estimated and checked with appropriate personnel.
3. Calculate costs.
- 3.1. Totals of individual materials, **labour and overhead costs** are calculated according to workplace procedures and statutory requirements.
 - 3.2. **Other project-specific costs** are identified and calculated according to workplace procedures.
 - 3.3. Total work cost is calculated, including mark-up percentages set by appropriate personnel.
 - 3.4. Final cost for work is calculated by applying profit margin according to workplace procedures, and is checked for accuracy.
4. Document and verify details.
- 4.1. Details of costs and charges are clearly and accurately documented according to workplace procedures.

- 4.2. Costs, calculations or other details are verified according to workplace procedures and current costing data.
- 4.3. Costing estimate and materials take-off are prepared for quote.
- 4.4. **Costing documents** are accurately completed for future reference according to workplace procedures.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
Learning skills to:	draw on experience of estimating labour time requirements and material costs, and apply knowledge to new jobs to be costed.
Oral communication skills to:	- confirm requirements with customer - use listening and questioning to clarify any issues.
Reading skills to:	read and interpret material specifications, job safety analyses (JSA) and Australian standards relevant to work to be undertaken.
Writing skills to:	produce accurate and legible written costing information.
Technology skills to:	- find and interpret information relevant to current costings for materials and labour using simple internet searches - use estimating and costing templates and software.

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.

- Plans and specifications*** must include three or more of the following:
- building codes
 - conceptual and preliminary sketches or drawings
 - environmental requirements relating to the acquisition, use and disposal of materials
 - project brief and scope of works, including relevant project plans and detailed project requirements
 - quotation conditions and terms of contract
 - relevant Australian standards and industry standards.

- Types and quantities of materials*** must include five or more of the following:
- aluminium
 - brick and blockwork
 - cement, sand, aggregates and bonding agents
 - claddings
 - decorative finishes
 - doors, windows and trims
 - fillers
 - fixings and fastenings
 - glazing
 - hardware
 - medium density fibreboard (MDF) or alternative substrate panelling
 - paint
 - prefinished boards and laminates
 - solid surfaces
 - steel
 - tiles
 - timber.

- Labour costs*** must include:
- estimation of time for manufacture, delivery, installation or application
 - personal protective equipment (PPE)
 - wages and on-costs for different types of construction workers.

- Overhead costs*** must
- administration
 - insurance

include:

- transport
- use of communication technology.

Other project-specific costs must include at least two of the following:

- plant and equipment hire
- project-related signs
- site facilities
- statutory fees and charges
- transport and delivery charges
- waste removal fees.

Costing documents must include three of the following:

- costing spreadsheets
- job sheets
- labour time allocation
- materials lists and estimates
- quotation templates
- take-off sheets.

Unit Mapping Information

CPCCCM2003B Calculate and cost construction work

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCCM3005 Calculate costs of construction work

Modification History

Release 1.

This version first released with CPC Construction, Plumbing and Services Training Package Version 2.

Revised unit of competency. Replaces superseded equivalent unit CPCCCM2003B Calculate and cost construction work

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. The person must also cost three different construction jobs, where the costing includes:

- estimating quantities of material required
- determining the types and amount of labour required to complete the work
- estimating time required to complete the work
- estimating overheads associated with the work
- totalling all costs and applying profit margin to establish a client quote.

In doing the above work, the person must:

- locate, interpret and apply information, standards and specifications relevant to estimating and costing work
- calculate final cost for the work and prepare a written quotation for each of the work requirements.

Knowledge Evidence

A person demonstrating competency in this unit must demonstrate knowledge of:

- accuracy and detail required in costing estimates for construction work
- construction terminology used in plans and specifications for construction work
- contents and impact of job safety analyses (JSA) and safe work method statements (SWMS) on costing construction work
- environmental and sustainability requirements relevant to the costing being determined
- procedures for applying the Goods and Services Tax (GST) to costings
- procedures for determining wages and overhead costs relevant to a quotation for construction work
- international system of units (SI) of measurements relevant to the construction industry
- process of estimating and costing construction work

- quality requirements of construction projects and their impact on time required for completion
- relevant statutory and authority requirements related to estimating and costing construction work
- sources of information on material requirements and processes for calculating them
- standards applicable to the work being costed, such as Australian standards and those in the National Construction Code
- terms and content of relevant contract documentation to inform estimate.

Assessment Conditions

Suitable assessment of performance requires:

- equipment:
 - calculator
 - computer with internet access
- specifications:
 - plans and specifications for the work to be undertaken
 - costing information
- relationship with client:
 - consultation with client is required.

Assessor requirements

As a minimum, assessors must satisfy the assessor requirements in the Standards for Registered Training Organisations (RTOs) current at the time of assessment.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>