

Draft 0.1

This is a draft update to CPPSIS4041 Set out site and building works:

<https://training.gov.au/Training/Details/CPPSIS4041>.

Code changed to CPPSUR4041.

Changed PCs to active voice.

Changed 'person' to 'candidate' in PE.

Range of Conditions added to Knowledge Evidence.

I've added mapping info.

TAG will need to reassess this as unit is redeveloped.

Unit of Competency

CPPSUR4041 Set out site and building works

Modification history

Release	Comments
1	Replaces superseded non-equivalent CPPSIS4029A Collect and set out basic surveying data. This version first released with CPP Property Services Training Package Version 3.
	Replaces superseded equivalent CPPSIS4041 Set out site and building works

Application

This unit specifies the skills and knowledge required to set out spatial data for building or site works using surveying methods and equipment. The unit covers using horizontal and vertical control techniques to set out marks and lines to define the position and level of design points on site. It also covers interpreting plans and specifications in order to conduct measurements and calculations that ensure building elements are the correct size, in the correct plan position, and at the correct reduced level. The unit requires the ability to check and validate measurements and calculations against specifications, and complete set-out documentation.

The unit supports those who work under supervision in a surveying field team.

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

Prerequisite Unit

None

Unit Sector

Surveying and spatial information services

Elements and Performance Criteria

1. Prepare for set-out tasks.	1.1 Access and interpret relevant plans and specifications to identify set-out requirements. 1.2 Select and prepare equipment according to set-out and organisational requirements. 1.3 Plan work in consultation with appropriate persons to ensure correct understanding of set-out activities.
2. Use control techniques for set-out.	2.1 Locate horizontal control points throughout work area and set out coordinates according to plans and specifications. 2.2 Set out and check design points to ensure correct tolerances according to specifications. 2.3 Use control points and check accuracy according to plans and specifications. 2.4 Use set-out pegs or markers to indicate base lines and offsets relative to work area. 2.5 Establish vertical control points to ensure design points are positioned at correct levels according to plans and specifications. 2.6 Put offsets and profiles in place to define main lines of building or site works and provide vertical controls.

	2.7 Reduce measured surveying data and are conduct calculations according to industry-accepted standards and organisational requirements.
3. Finalise set-out tasks.	3.1 Check and validate measurements to ensure correct size, plan position and reduced level of set-out according to plans and specifications. 3.2 Identify, address or report discrepancies between specifications and actual activities according to organisational requirements. 3.3 Finalise set-out and complete documentation according to organisational requirements.

Foundation Skills

Candidates require:

- numeracy skills to:
 - perform surveying calculations relating to height, distances, angles and coordinates
 - set required datums and projections
- oral communication skills to:
 - ask questions to clarify task requirements
- reading skills to:
 - interpret graphical information in construction plans and drawings
- writing skills to:
 - record field notes in a format that can be interpreted by a third party
- problem-solving skills to:
 - identify and use primary and secondary controls to improve accuracy of measurements.

Unit Mapping Information

Supersedes and is equivalent to CPPSIS4041 Set out site and building works

Links

Companion Volume Implementation Guide:

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

Assessment Requirements for CPPSUR4041 Set out site and building works

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Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by:

- setting out spatial data for site or building works for two different projects as follows:
 - one project is to be conducted using a total station
 - one project is to be conducted using a global navigation satellite system (GNSS).

While setting out the above spatial data, the candidate must:

- plan work tasks by checking plans, maps, specifications and control marks
- communicate clearly with others to clarify work tasks and report project information
- set out marks and lines to define position and level of design points on site
- use horizontal and vertical control techniques to position design points and markers
- comply with organisational and legislative requirements for:
 - identifying hazards and working safely
 - recording, storing and filing spatial data
 - setting up and using surveying equipment
- comply with manufacturer specifications when using surveying equipment
- measure and calculate spatial data within industry-accepted tolerances for accuracy.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- mathematical concepts relating to algebra, trigonometry and geometry and their use in calculating spatial measurements
- methods for performing the following:
 - calculating surveying data and verifying its accuracy using primary and secondary controls
 - establishing a control network that meets specified tolerances
 - recording spatial data relating to set-out
 - setting up, levelling and calibrating equipment used to set out spatial data
- purpose of primary and secondary controls for set-out
- reference and coordinate systems for surveying data, including Australian Height Datum and Map Grid of Australia
- types of pegs and markers used during set-out, and methods for ensuring their optimal placement on site
- appropriate persons:
 - experienced colleague
 - qualified surveyor
 - site engineer

- supervisor or line manager.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to:

- equipment:
 - GNSS
 - total station
- specifications:
 - job specifications, maps and plans
 - organisational policies and procedures relating to:
 - work health and safety
 - setting up and using surveying equipment
 - spatial data collection
- relationships with team members and supervisor:
 - working in a team.

Links

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