

Draft 0.2

This is a draft update to CPPSIS4030 Operate surveying equipment:
<https://training.gov.au/Training/Details/PPSIS4030>.

Code changed to CPPSI4030.

Changed PCs to active voice.

Changed 'person' to 'candidate' in PE.

Deleted: ' hand-held' and 'navigating and recording a traverse' from first dot point in PE

Reference to: 'two different projects' in first sentence of PE may be problematic at audit as no specific details provided

Range of Conditions added to Knowledge Evidence.

Unit of Competency

CPPSSI4030 Operate surveying equipment

Modification history

Release	Comments
1	Replaces superseded equivalent CPPSIS4030A Operate surveying equipment. This version first released with CPP Property Services Training Package Version 3.
	Replaces superseded equivalent CPPSIS4030 Operate surveying equipment

Application

This unit specifies the skills and knowledge required to use a range of surveying equipment for data capture or spatial data set-out. It involves selecting, setting up and operating surveying equipment to perform basic measurements and recording and calculating horizontal and vertical information. This includes validating and checking data accuracy and performing basic data reductions and manipulation using software.

This unit is suitable for entry level technicians who will use a broad range of cognitive, technical and communication skills to select and apply a range of methods, tools, materials and information to complete routine and non-routine activities and provide and transmit solutions to a variety of predictable and sometimes unpredictable problems. Surveying and spatial information skills are applied in a range of industry contexts including town planning, civil construction, mining, engineering, health, agriculture and defence.

All work must be carried out to comply with workplace procedures, in accordance with relevant State/Territory regulations that govern surveying work as well as work health and safety, regulations and legislation that apply to the workplace.

Cadastral surveying must be undertaken under the supervision of a registered surveyor. Users must check with the relevant regulatory state/territory authority before delivery.

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. Plan surveying tasks.	<ol style="list-style-type: none">1.1 Identify and clarify task requirements with appropriate persons.1.2 Interpret technical and diagrammatic information in task specifications and designs.1.3 Review design information to identify components to be measured in consultation with appropriate persons.1.4 Select and check surveying equipment to meet task requirements, and report problems according to manufacturer and enterprise requirements.
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	1.5 Check hazards associated with task, implement controls to manage and report problems according to enterprise requirements.
2. Execute surveying tasks.	2.1 Set up and adjust equipment required to measure identified survey components according to standard operating procedures. 2.2 Operate equipment and software to manipulate basic spatial data. 2.3 Cooperate with on-site personnel according to task requirements. 2.4 Comply with enterprise, legislative and manufacturer requirements for working safely.
3. Calculate surveying data.	3.1 Reduce and manipulate measured surveying data for comparison with design to meet task and organisational requirements. 3.2 Confirm that measurements and computations meet industry-accepted standards for accuracy. 3.2 Check data against task requirements and identify and resolve errors in consultation with appropriate persons. 3.3 Validate and record clear and accurate measurements, computations and field checks according to industry-accepted standards and enterprise requirements.
4. Finalise surveying tasks.	4.1 Finalise surveying activities and process data according to task and enterprise requirements. 4.2 Record and document measurements and data according to enterprise requirements. 4.3 Pack up and store equipment according to manufacturer specifications and enterprise requirements. 4.4 Report any identified faults and problems with equipment 4.5 Complete documentation and store data according to enterprise requirements.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPPSIS4030 Operate surveying equipment

Links

The Companion Volume Implementation Guide for the CPP Property Services Training Package is available at <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSSI4030 Operate surveying equipment

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Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit for two different surveying tasks.

In completing the surveying tasks the candidate must operate a Total Station and an automatic, digital or laser level and one other item of surveying equipment for spatial data capture or data set-out from the following:

- RTK/GNSS
- terrestrial laser scanner
- unmanned aerial vehicle (UAV).

The candidate must use two of the following while capturing or setting out surveying data for each of the above surveying tasks:

- compass
- data recording equipment
- digital or hard copy map or image
- distance measuring wheel
- hand-held laser measuring device
- measuring tape
- prism with prism pole
- levelling staff
- retro targets.

Knowledge Evidence

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

- types, functions and limitations of surveying equipment
- methods for setting up, levelling, checking calibration and using the surveying equipment
- techniques to solve basic problems relating to height, dimension, direction and position
- key features of geographic and projected spatial reference systems
- key features of the Australian Height Datum
- acquisition methods for surveying data
- attributes associated with a spatial dataset
- methods for downloading spatial data collected using the surveying equipment
- accepted enterprise standards for recording metadata
- use of personal protective equipment (PPE)
- relevant safe work method statements (SWMS) and job safety analyses (JSA).

Assessment Conditions

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

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting where these skills and knowledge would be performed.

Candidates must have access to:

- equipment operating manuals
- standard operating procedures and documentation relating to work tasks.

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