



**Australian Government**

# **ICTTEN301 Provide infrastructure for telecommunications network equipment**

**Release: 1**

# ICTTEN301 Provide infrastructure for telecommunications network equipment

## Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

## Application

This unit describes the skills and knowledge required to install supporting infrastructure for telecommunications equipment and associated hardware equipment.

It applies to field officers, installation technicians or technical supervisors from carriers, contractors or other service providers who install switching, transmission and radio networks and the various transmission paths – including cable, optical fibre, radio, microwave and satellite.

Work functions in the occupational areas where this unit may be used are subject to regulatory requirements. Refer to the ICT Implementation Guide Companion Volume or the relevant regulator for details of licensing, legislative or certification requirements.

## Unit Sector

Telecommunications – Telecommunications Networks Engineering

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for installation infrastructure work	1.1 Obtain relevant legislation, codes, regulations and standards for compliance when conducting work 1.2 Notify customer to arrange site access and obtain installation plan and specifications 1.3 Conduct site survey to verify infrastructure installation requirements can be met 1.4 Identify site hazards and notify appropriate personnel to make

ELEMENT	PERFORMANCE CRITERIA
	<p>site safe</p> <p>1.5 Notify customer of alterations required to installation design and make recommendations for possible solutions</p> <p>1.6 Obtain approval for alterations and update installation plan</p> <p>1.7 Develop installation activity schedule to minimise workplace disruption and according to relevant regulations and standards</p> <p>1.8 Obtain material supplies, safety equipment, resources, tools and test equipment so it is available when required for installation for safe work practice</p>
2. Build network equipment infrastructure	<p>2.1 Prepare for given work according to work health and safety (WHS) and environmental requirements</p> <p>2.2 Build metal superstructure to house equipment according to manufacturer's specifications and to safety and electrical standards</p> <p>2.3 Build ducts and tray ways for signal and data cabling and optical cables according to plan and specification after consultation with operational staff</p> <p>2.4 Build busbars or power cabling infrastructure as specified on the plan</p> <p>2.5 Install cable distribution frames according to plan and manufacturer's specifications</p> <p>2.6 Install earthing to all metal infrastructures according to specifications</p>
3. Install power infrastructure	<p>3.1 Install batteries and rectifiers and connect according to manufacturer's and WHS requirements</p> <p>3.2 Test and monitor battery discharge levels and obtain replacement batteries under warranty where required</p>
4. Supervise DC power distribution	<p>4.1 Coordinate and arrange for power distribution work to be performed by qualified personnel to meet electrical safety requirements and certifications</p> <p>4.2 Monitor electrical work to ensure compliance with installation plan</p> <p>4.3 Identify and rectify faults where possible or escalate according to enterprise policy</p>
5. Restore site and complete documentation	<p>5.1 Attach infrastructure labels and designations according to enterprise requirements</p> <p>5.2 Complete inspection sheets and declare asset ready for next stage</p>

ELEMENT	PERFORMANCE CRITERIA
	of installation using appropriate sign-off documentation 5.3 Clean up and prepare site in readiness for next installation phase 5.4 Notify customer and obtain sign-off

## Foundation Skills

*This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.*

Skill	Performance Criteria	Description
Reading	1.1, 1.3, 2.1-2.6, 3.1, 4.1, 4.2	<ul style="list-style-type: none"><li>Interprets and applies textual information from plans, specifications, legislation and regulatory documents to building and construction</li></ul>
Writing	1.3, 1.5-1.7, 5.1, 5.2, 5.4	<ul style="list-style-type: none"><li>Documents outcomes and changes to plans using industry relevant terminology and recognised plan symbols</li><li>Prepares documentation for outcomes of tests and inspections for reporting to clients and others</li></ul>
Oral Communication	1.2, 1.4-1.6, 2.3, 5.4	<ul style="list-style-type: none"><li>Uses active listening skills and oral exchange when discussing and clarifying installation parameters and providing feedback to clients</li><li>Actively engages with others to communicate work requirements and activities</li></ul>
Numeracy	2.2-2.6, 3.2	<ul style="list-style-type: none"><li>Takes measurements and uses them for work layout and construction</li><li>Makes calculations appropriate to measuring and estimating materials for construction</li></ul>
Navigate the world of work	1.1, 1.7, 2.1, 2.2, 3.1, 4.1, 4.3, 5.1	<ul style="list-style-type: none"><li>Accepts responsibility and ownership for the task and makes decisions on completion parameters and the need of coordination with others</li><li>Takes personal responsibility for following explicit and implicit policies, procedures and legislative requirements</li></ul>
Interact with others	1.2, 1.4-1.6, 2.3, 3.2, 4.1	<ul style="list-style-type: none"><li>Selects and uses appropriate conventions and protocols when communicating to clients and co-workers in a range of work contexts</li><li>Complies with work instructions and contributes to work group discussions using accepted conventions</li></ul>

Get the work done	1.1, 1.3, 1.4, 1.7, 1.8, 2.2-2.6, 3.1, 3.2, 4.1-4.3, 5.2, 5.3	<ul style="list-style-type: none"><li>• Takes responsibility for planning, sequencing and prioritising tasks and workload for efficiency and effective outcomes</li><li>• Makes routine decisions and implements standard procedures for routine tasks, using formal decision-making processes for more complex and non-routine situations</li></ul>
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## Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN301 Provide infrastructure for telecommunications network equipment	ICTTEN3054B Provide infrastructure for telecommunications network equipment	Updated to meet Standards for Training Packages.	Equivalent unit

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>