



Australian Government

ICTCBL251 Install aerial and underground cable lead-ins

Release: 1

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Modification History

Release	Comments
Release 1	This version released with ICT Information and Communications Technology Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to install indoor and outdoor aerial and underground lead-ins for a new metallic or optical cable installation, or upgrade of an existing network or subsystem, or cabling infrastructure for convergence to next generation networks (NGN), digital reception and broadband.

Cable installation may be for a new cable, a cable upgrade or a cable in need of repair. It can be applied to new installations and upgrades of telecommunications cabling projects in domestic, commercial and industrial customer installations.

It applies to technical staff who haul underground or fixed aerial cable lead-in to deliver services in x-digital subscriber line (xDSL), fibre to the home (FTTH) and hybrid fibre coaxial (HFC) networks. This work may require the use of tension meters and hauling equipment.

Licensing, legislative, regulatory and certification requirements apply to telecommunications systems. All customer cabling work in the telecommunications, fire, security and data industries must be performed by a registered cabler. All cablers are required to register with an Australian Communications and Media Authority (ACMA) accredited registrar. Refer to the ICT Information and Communications Technology Training Package Companion Volume Implementation Guide or the relevant regulator for details of licensing, legislative or certification requirements.

Unit Sector

Telecommunications – Cabling

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 cable	1.1 Obtain construction plan from appropriate personnel to scope

ELEMENT	PERFORMANCE CRITERIA
installation	work and arrange for site access 1.2 Access site according to enterprise procedure 1.3 Inform appropriate personnel of identified hazards and safety constraints on worksite 1.4 Obtain cable installation plan and set up installation equipment according to manufacturer requirements 1.5 Identify existing ‘other’ services by analysing drawings and following Dial Before You Dig (DBYD) protocols 1.6 Determine cable route and type of cable from construction plan, identifying and avoiding other services 1.7 Select suitable protective clothing, tools and equipment, and safety equipment, and confirm support structures are safe
2 Install aerial cable lead-in	2.1 Use safe support structures and appropriate tools 2.2 Select required type of cable bearer and determine need for separate catenary wire or self-supporting installation 2.3 Install and secure catenary wire, integral bearer cable (IBC) or self-supporting cable permanently to support structure using aerial fixing devices, and adjust tension to meet relevant height and minimum sag requirements to required specifications 2.4 Secure cable safely, leaving cable loop on support structure 2.5 Install mid-span fly offs according to cable configuration, using approved hardware 2.6 Install cable ensuring no damage is caused 2.7 Maintain physical characteristics of cable leaving cable loop on support structure according to cable configuration 2.8 Terminate and test cable continuity in customer enclosure and aerial enclosure 2.9 Label cables according to industry guidelines and authorisations
3 Install underground cable lead-in	3.1 Ensure pipe or conduit is not blocked and is clear of debris 3.2 Run push rod through pipe and attach cable for hauling 3.3 Haul cable using lubricant, cable slippers or rollers to ensure no sheath damage when hauling at correct tension into and out of enclosures 3.4 Provide sufficient cable allowance in enclosures for jointing and maintenance requirements 3.5 Terminate cable in customer enclosure and pit enclosure

ELEMENT	PERFORMANCE CRITERIA
4 Seal and secure cable	4.1 Seal cable ends to prevent entrance of foreign material according to manufacturer specifications and industry standards 4.2 Secure cable loop on support structure to minimise damage to conductors 4.3 Weatherproof building entry points as required 4.4 Fit over voltage protection devices to all cables with metallic component as required
5 Complete tasks on site	5.1 Record any approved alteration to original design and return to appropriate personnel 5.2 Complete appropriate records and sign reports as required according to industry policy 5.3 Restore site to original condition and dispose of waste in environmentally safe manner 5.4 Notify appropriate personnel and obtain sign-off

Foundation Skills

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

Skill	Description
Reading	Uses a range of strategies to facilitate comprehension
Writing	Completes records according to enterprise requirements
Oral Communication	Use language and non-verbal features appropriate to context
Numeracy	Interprets and comprehends a range of everyday mathematical information that is embedded in familiar and routine texts
Navigate the world of work	Takes personal responsibility for adherence to legal and regulatory responsibilities relevant to own work context, and draws attention to any issues that may affect self or others
Get the work done	- Implements actions as per plan, making slight adjustments if necessary, and addressing some unexpected issues - Automatically implements standard procedures for routine decisions in response to familiar problems

Unit Mapping Information

No equivalent unit. Supersedes and is not equivalent to ICTCBL220 Install a cable lead-in.

Links

Companion Volume Implementation Guides are available from VETNet -

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