



Australian Government

UEEDV0007 Install underground communication cables

Release: 1

UEEDV0007 Install underground communication cables

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to install underground communication cables.

It includes working safely, preparing and filling trenches, placing conduits and ducts, drawing cables and completing documentation.

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

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEECD0020 Fix and secure electrotechnology equipment

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEEDV0005 Install and maintain cabling for multiple access to telecommunication services and

UEECD0043 Solve problems in direct current circuits

or

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

Competency Field

Data and Voice

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to install underground communication cables

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given work area are identified, obtained and applied
- 1.2** WHS/OHS risks are identified, and risk control measures and workplace procedures are followed in preparation for the work
- 1.3** Safety hazards that have not previously been identified are noted and risk control measures implemented
- 1.4** Cabling installation is prepared in consultation with others affected by the work and sequenced in accordance with workplace procedures
- 1.5** Scope of the work is determined from documentation and/or discussions with relevant person/s to establish the work to be undertaken
- 1.6** Cable routes are planned in accordance with the precinct, structure, significants and relevant industry standards
- 1.7** Advice is sought from relevant person/s to ensure the work is coordinated effectively with others
- 1.8** Material required for installation work is obtained in accordance with workplace procedures and job specifications
- 1.9** Tools, equipment and testing devices required for the installation work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 1.10** Preparatory work is checked to ensure no damage has occurred in accordance with job specifications requirements

2 Install underground communication cables

- 2.1** WHS/OHS risk control measures and workplace procedures for carrying out the work are followed

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|---|---|
| | <ul style="list-style-type: none">2.2 Trenching is checked in accordance with job specifications and relevant industry standards2.3 Ducts/conduits are laid in accordance with job specifications and relevant industry standards2.4 Cables are drawn-in without stain or damage in accordance with job specifications and relevant industry standards2.5 Cable ends are protected from damage in preparation for termination2.6 Methods for dealing with unplanned situations are discussed with relevant person/s for approval and documented in accordance with workplace procedures2.7 Unplanned situations are dealt with safely and with the approval of relevant person/s2.8 Quality checks of the installed wiring are undertaken in accordance with workplace procedures2.9 Cable installation is carried out efficiently without waste of materials or damage to apparatus, circuits or the surrounding environment using sustainable energy practices |
| 3 Document and verify installation of underground communication cables | <ul style="list-style-type: none">3.1 WHS/OHS work completion risk control measures and workplace procedures are followed3.2 Worksite is cleaned and made safe in accordance with workplace procedures3.3 Documentation of cable installation is completed in accordance with workplace procedures |

Foundation Skills

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

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work

environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEENEEF113A Install underground communication cables.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEEDV0007 Install underground communication cables

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- reading and interpreting drawings related to cable schedules and routes
- installing ducts/conduits below ground correctly
- drawing in cables without strain or damage
- protecting cable ends
- completing the necessary documentation accurately
- dealing with unplanned events
- applying relevant work health and safety (WHS)/occupational health and safety (WHS/OHS) requirements, including using risk control measures
- carrying out cable installation efficiently without waste of materials or damage to apparatus, circuits or the surrounding environment using sustainable energy practices
- checking trenching in accordance with job specifications and relevant industry standards
- documenting and verifying installation of underground communication cables
- installing underground communication cables
- obtaining material required for installation work
- obtaining tools, equipment and testing devices required for the installation work and checking for correct operation and safety
- preparing to install underground communication cables.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- telecommunication underground cabling requirements and techniques, safe working practices and relevant standards, codes and regulations, including:
 - hazards and control measures in underground cabling working environment:
 - risk management and assessment of risk:
 - principle and purpose of risk management
 - processes for conducting a risk assessment
 - hazards associated with low voltage (LV), extra-low voltage (ELV) and high currents:

- parts of an electronic systems and equipment that operate at LV and ELV
- parts of an electronic systems and equipment where high currents are likely
- risks and control measures associated with high voltage (HV):
 - parts of an electronic systems and equipment that operate at HV
 - the terms ‘touch voltage’, ‘step voltage’, ‘induced voltage’ and ‘creepage’ as they relate to the hazards of HV
 - control measures used for dealing with the hazards of HV
- risks and control measures associated with LV:
 - risks associated with installation, fault finding, maintenance and repair
 - control measures before, while and after working on electronic systems or equipment
 - isolation and tagging-off procedures
 - risks and restrictions in working live
 - control measures for working live
- risks and control measures associated with trenches:
 - identification of trenching conditions
 - notification of relevant authorities/utilities and permits
 - digging and trenching equipment safety
 - methods of shoring
 - public safety
 - personal safety equipment
- telecommunication below ground cabling:
 - types and purposes of mechanical and manual aids
 - purpose, location, and capacity of manholes and pits
 - types of underground cable
 - procedure for the excavation of a site for the installation of a manhole, pit, pipe and conduit
- problem-solving techniques
- relevant manufacturer specifications and operating instructions
- relevant tools, equipment and testing devices
- relevant workplace documentation
- relevant workplace quality, policies and procedures
- sustainable energy practices.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated suitable workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, facilities and equipment currently used in industry
- resources that reflect current industry practices in relation to installing underground communication cables
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>