



**TECHNICAL STANDARD TS 26 21 10
ELECTRICAL SERVICES CROSSING
GOULBURN-MURRAY WATER STORAGE
PERIMETER LAND**

Document History and Distribution

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Table of Contents

- PART 1 GENERAL.....1**
 - 1.01 INTRODUCTION1
 - 1.02 REFERENCES1
 - 1.03 SUBMITTALS2

- PART 2 PRODUCTS3**
 - 2.01 MATERIALS3

- PART 3 EXECUTION.....3**
 - 3.01 INSPECTION.....3
 - 3.02 REINSTATEMENT OF THE SITE TO PRE-EXISTING
CONDITION3
 - 3.03 UNDERGROUND ELECTRIC LINES REQUIREMENTS3
 - 3.04 SITE CLEAN-UP.....4

- ANNEXURE 1 - SITE SPECIFIC DETAILS5**

- ANNEXURE 2 - DRAWINGS.....6**

PART 1 GENERAL**1.01 INTRODUCTION****A. PURPOSE**

- a) The scope of work in this Technical Standard comprises the requirements for electrical services crossing Goulburn-Murray Water (the 'Corporation') storage perimeter land.
- b) Electrical supply (buried or overhead cabling) and electrical switchboards will not normally be permitted on land owned or controlled by the Corporation.
- c) Where there is no other option and electricity supply cables to licensed diversion pumps are approved, this Technical Standard shall apply.

B. GENERAL

- a) Directions, instructions and the like given in this Technical Standard, whether or not they include the expression 'the Contractor shall' or equivalent, shall be directions to the Contractor, unless otherwise specifically stated in the Contract.
- b) Reference to the Superintendent shall also be taken to refer to the Corporation where a Superintendent has not been appointed to the Contract e.g. for a C15 Offer for Works and Services Contract.
- c) Undertake the works in accordance with relevant Legislation, Australian Standards, Codes of Practice, Corporation requirements and this Technical Standard.
- d) There shall be no deviation from the requirements of this Technical Standard unless prior written approval has been obtained from the Corporation.

C. EXCLUSIONS

Nil.

1.02 REFERENCES**A. AUSTRALIAN STANDARDS**

- a) AS/NZS 3000:2007 - Australian/New Zealand Wiring Rules;
- b) AS/NZS 2053:2001 - Conduits and fittings for electrical installations - General requirements;
- c) AS 1074:1989 - Steel tubes and tubulars for ordinary service;
- d) AS 2648.1:1995 - Underground marking tape - Non-detectable tape.

1.03 SUBMITTALS

A. SUBMISSION OF DRAWINGS

- a) Where a proposed electrical crossing over any Corporation asset is proposed, Drawings should be submitted to the Corporation for approval. The Drawings must include the following and comply with the guidelines within this document:
 - i. A locality plan to indicate the proposed location of the works in relation to the nearest channels, drains, natural water courses, roads, major buildings and any other structures or features in the surrounding area;
 - ii. A site plan to depict the configuration of the electrical crossing in relation to other features in its vicinity, eg channel or drain location, easement / reserve / freehold boundary fences, access tracks and any other structures within the vicinity;
 - iii. An electrical installation drawing which details the installation method and equipment to be installed (including cable and conduit sizing).
- b) The Drawings do not have to be to scale, however the details shown must be representative of site conditions with dimensions shown on the Drawings.

B. LICENCES, FEES AND CHARGES

a) Privately Owned Works

- i. Prior to the commencement of works, the owner of the electrical works is required to enter into a 'Construction and Use of Private Works Licence' with the Corporation.
- ii. Applicants are referred to the Corporation website under 'Customer Services/Forms' where the required forms for the application for private works may be found.
- iii. Two copies of these licences will be sent out to the owners for their signature which should be returned to the address detailed below, together with the fees and charges which will be advised by the Corporation upon application.

Send to:

Manager Property Services Tatura
PO Box 165
TATURA Vic 3616

b) Utility Owned Works

- i. No licences are required for works on Corporation reserves or easements for utility owned works, however the required fees and charges which will be advised by the Corporation upon application should be forwarded to the address detailed in Section 1.03 Ba)ii.

C. CONTRACTOR INSURANCE REQUIREMENTS

- a) With the exception of works to be undertaken on road reserves by a utility (not privately owned works), the Contractor shall lodge with the Manager Property Services evidence of having obtained an insurance indemnity, bank guarantee or other indemnity guarantee, approved by the Corporation, to cover public risk whilst the works are in progress, before commencement of work. The insured amount shall be \$20,000,000.00.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Nil.

PART 3 EXECUTION**3.01 INSPECTION**

- A. The works shall be carried out under the supervision of and to the satisfaction of the Corporation's Manager Dams Land and Water or his representative.
- B. A minimum of two clear working days notice must be given to the Corporation before construction commences within the area. An inspection of any excavated trench by the Corporations' representative will be required prior to any cabling being covered.

3.02 REINSTATEMENT OF THE SITE TO PRE-EXISTING CONDITION

- A. On completion of the works, all excavations are to be reinstated to their original condition, all surplus material and refuse must be removed off the site and the site left in a clean state.

3.03 ELECTRICAL CABLING REQUIREMENTS

- A. Overhead electrical supply cabling is not permitted for any privately owned works within the Corporations reserve or easement.
- B. In all cases:
 - a) The cables shall be double-insulated, or XLPE and shall be encased in heavy duty rigid PVC conduit (to AS 2053) or heavy galvanised steel tube (to AS 1074);
 - b) Caution signs shall be located on the reserve or easement boundaries. Signs shall be in accordance with Figure 1 in Annexure 2; and
 - c) The Corporation is to be provided with a copy of the Certificate of Electrical Safety, completed and signed by a licenced electrician at the completion of works.
- C. Wherever cables are laid in an open cut trench within the Corporation reserve or easement:
 - a) The cables shall be laid with minimum cover of 600 mm below the natural surface within the Corporation's reserve or easement;

- b) The cables shall have underground electricity marking tape to AS 2648 Part 1, laid 0.2 m directly below the natural ground surface along the entire underground length of cable within the reserve or easement; and
 - c) Backfilling of any portion of a trench shall be compacted fill material not containing rocks or other sharp objects that would be retained on a 15 mm sieve.
- D. Wherever cable conduits are proposed to be under bored within the Corporation reserve or easement, the conduit shall be laid a minimum of 1.0 metre below the natural surface.
- E. Wherever cables are laid in an open cut trench within the Corporation reserve or easement:
- a) The cables shall be laid with minimum cover of 600 mm below the natural surface within the Corporation's reserve or easement;
 - b) The cables shall have underground electricity marking tape to AS 2648 Part 1, laid 0.2 m directly below the natural ground surface along the entire underground length of cable within the reserve or easement; and
 - c) Backfilling of any portion of a trench shall be compacted fill material not containing rocks or other sharp objects that would be retained on a 15 mm sieve.

3.04 SITE CLEAN-UP

- A. The Contractor shall clean up and dispose of all materials and debris on site associated with the works.

ANNEXURE 1 - SITE SPECIFIC DETAILS

ANNEXURE 2 - DRAWINGS

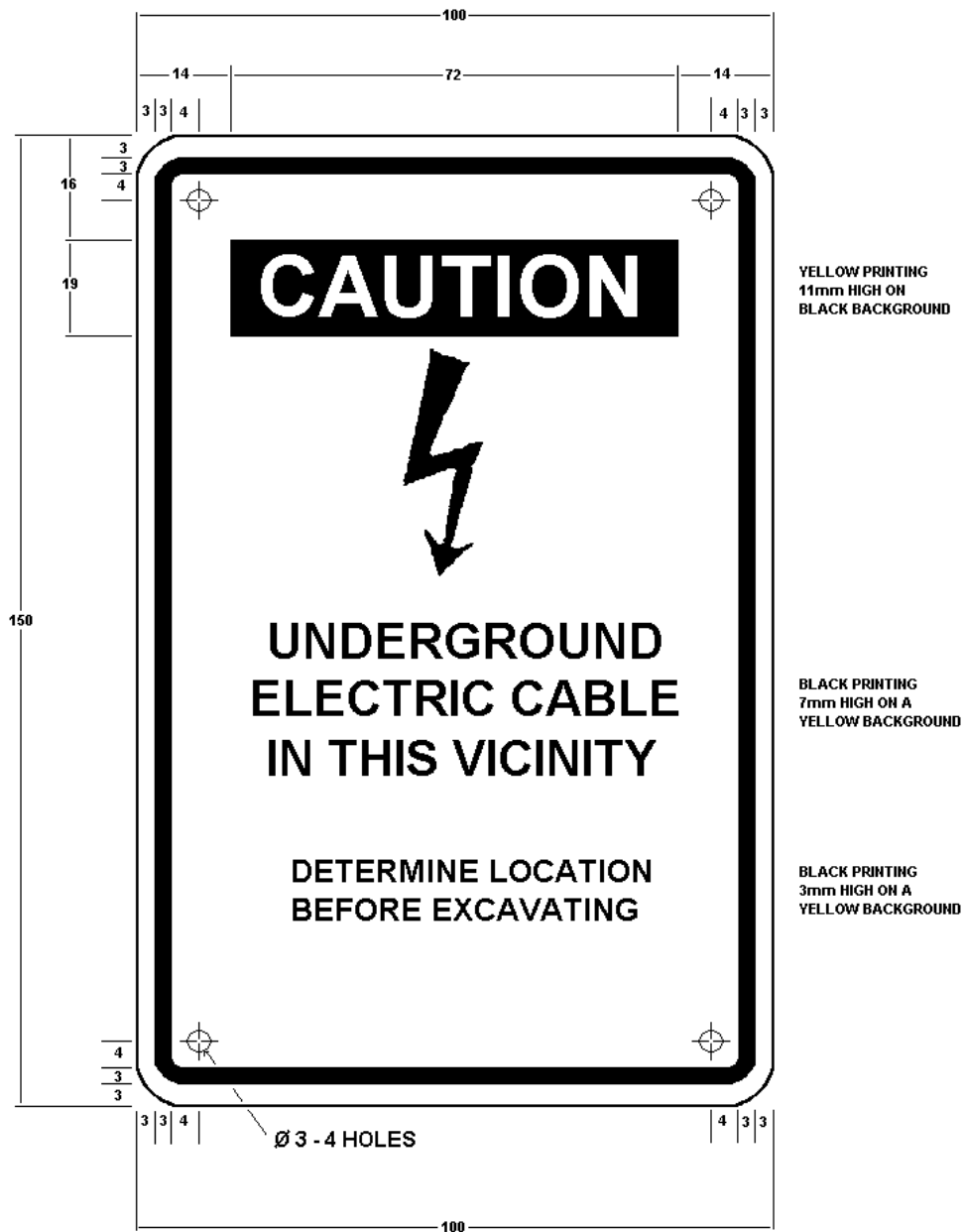


Figure 1. Typical Underground Cable Warning Sign

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