

**SS 576 : 2019**  
(ICS 29.060; 93.020)

**SINGAPORE STANDARD**

**Code of practice for earthworks in the vicinity of  
electricity cables**



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The Technical Committee sets up the Working Group on Earthworks in the Vicinity of Electricity Cables to prepare this standard. The Working Group consists of the following experts who contribute in their *individual capacity*:

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The organisations in which the experts of the Working Group are involved are:

*Association of Consulting Engineers Singapore*  
*Energy Market Authority*  
*JTC Corporation*  
*Ministry of Manpower*  
*SP Group*  
*The Institution of Engineers, Singapore*  
*The Singapore Contractors Association Ltd*

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## **Foreword**

This Singapore Standard was prepared by the Working Group on Earthworks in the Vicinity of Electricity Cables set up by the Technical Committee on Buildings Facilities and Services under the purview of EESC.

This is a revision of SS 576 : 2012, Singapore Standard developed to serve as a guide to best practice for earthworks activities near underground electricity cables to reduce the possibility of cable damages. The intent of the standard is to minimise the number of damages to electricity cables caused by earthworks undertaken by contractors.

This is a revision of SS 576 : 2012. The key changes of this revision are as follows:

- Inclusion of a new clause 9.3 on personal protective equipment.
- Deletion of the informative Annex on “Relevant sections of the Electricity Act legal requirements”.
- Deletion of the informative Annex on “Forms”.

This standard covers best practices for earthwork activities near underground electricity cables to reduce the possibility of cable damages. Earthworks can involve excavations in the construction of buildings, roads, viaducts, flyovers and sewers, laying of pipes and cables, soil investigation works, boring, dredging, jacking and piling, and sinking of earth rod. The intent of the standard is to minimise the number of damages to electricity cables caused by earthworks undertaken by contractors, which could adversely affect electricity consumers.

In preparing this Singapore Standard, reference was made to the following publications:

1. Code of practice on working near electricity supply lines, 2005 Edition, Electrical and Mechanical Services Department, the Government of the Hong Kong Special Administrative Region.
2. Electricity Act.
3. Learner's Guide, WSQ Detect & Locate Underground Power Cables, Singapore Institute of Power and Gas.

Acknowledgement is made to Hong Kong Special Administrative Region for the use of their materials.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

### **NOTE**

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions. Where SSs are deemed to be stable, i.e. no foreseeable changes in them, they will be classified as “Mature Standards”. Mature Standards will not be subject to further review, unless there are requests to review such standards.*
2. *An SS or TR is voluntary in nature except when it is made mandatory by a regulatory authority. It can also be cited in contracts making its application a business necessity. Users are advised to assess and determine whether the SS or TR is suitable for their intended use or purpose. If required, they should refer to the relevant professionals or experts for advice on the use of the document. Enterprise Singapore and the Singapore Standards Council shall not be liable for any damages whether directly or indirectly suffered by anyone or any organisation as a result of the use of any SS or TR. Although care has been taken to draft this standard, users are also advised to ensure that they apply the information after due diligence.*
3. *Compliance with a SS or TR does not exempt users from any legal obligations.*

## **Code of practice for earthworks in the vicinity of electricity cables**

### **0 Introduction**

Damage to electricity supply cables can cause electrical accidents and electricity supply interruptions. Fatal accidents and serious injuries have occurred during excavation close to underground electricity cables. In addition, damage may also cause an electricity supply interruption that could potentially affect all electricity consumers.

This standard outlines the dangers that can arise from earthworks near underground electricity cables and gives guidance on how to reduce the risk. It deals specifically with risk to persons carrying out earthworks and the necessary precautions needed to reduce the risk of accidents due to damage and unsafe practices.

### **1 Scope**

This standard applies to all earthworks carried out in the worksite or in its vicinity where underground cables may be found. It provides practical safety precautions to avoid damage to electricity supply cables in different situations, including earthworks that involve excavation, ground penetration and earth moving operations by heavy machinery.

### **2 Normative references**

There are no normative references in this standard.