INTERNATIONAL STANDARD

ISO 21542

First edition
2011-12-15

Building construction — Accessibility and usability of the built environment

Construction immobilière — Accessibilité et facilité d'utilisation de l'environnement bâti

Reference number
ISO 21542:2011(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 21542 was prepared by Technical Committee ISO/TC 59, *Buildings and civil engineering works*, Subcommittee SC 16, *Accessibility and usability of the built environment*.

This first edition cancels and replaces ISO/TR 9527:1994.

Introduction

This International Standard provides building users, architects, designers, engineers, builders, building owners and managers, manufacturers, policy makers and legislators with requirements and recommendations to create a sustainable built environment which is accessible.

The purpose of this International Standard is to define how the built environment should be designed, constructed and managed to enable people to approach, enter, use, egress from and evacuate a building independently, in an equitable and dignified manner and to the greatest extent possible.

The intention of this International Standard is to meet the needs of the majority of people. This goal is achieved by agreement on minimum standards of provision which are generally accepted to accommodate the diversities of age and of human condition. This agreement has been reached by consensus between different countries all over the world.

In some countries a higher level of technical specifications has been achieved due to their long history in developing accessible building standards and regulations. The requirements of this International Standard are not intended to replace more demanding requirements defined in those national standards or national regulations.

These principles are supported by Preamble (g) and Articles 9, 10 and 11 of the United Nations Convention on the Rights of Persons with Disabilities.

NOTE 1 The Convention on the Rights of Persons with Disabilities, with its Optional Protocol, was adopted by the General Assembly of the United Nations on 13 December 2006. It came into force, i.e. became an international legal instrument, on 3 May 2008. Furthermore, information about the Convention and its text can be found on the United Nations website: http://www.un.org/disabilities/. The Convention is serviced by a joint secretariat, consisting of staff from both the United Nations Department of Economic and Social Affairs (DESA), based in New York, and the Office of the High Commissioner for Human Rights (OHCHR) in Geneva.

This International Standard sets out the objectives, design considerations, requirements and recommendations that ISO expects to result in accessible and usable buildings when fully implemented.

This International Standard should be applied to new and existing buildings.

If these design requirements are taken into consideration in the early stages of building design, the costs of providing accessibility and usability measures are minimal and raise the value of the property in terms of sustainability. Where alterations and refurbishment occur, the additional cost depends on the size and complexity of the particular building and its adaptations.

NOTE 2 For further information on costs of accessible buildings see ETH-Study from Switzerland: http://www.hindernisfrei-bauen.ch/kosten_f.php.

This International Standard contains a combination of essential requirements, i.e. provisions which are essential for accessibility and usability of the built environment, and recommendations for an improved environment. The essential requirements are preceded by the word “shall”. For recommendations which are desirable, the provisions are preceded by the word “should”.

This International Standard may be applied in accordance with the National Regulations of the Member Bodies who have adopted this International Standard and stated in their National Foreword the terms under which it is to be applied.

This International Standard may be used by

a) national authorities to determine a specific programme of implementation, and

b) building owners to fulfil their responsibilities according to anti-discrimination and equity legislation, or on a voluntary basis.

As most buildings are subject to refurbishment, upgrade or change of use at some stage during their life cycle, national regulations can require all or part of this International Standard to be applied.

National building regulations may include considerations of legislation on equality, particular building and site constraints, different types of buildings, and the costs and benefits to society generally. It is also important to ensure that existing buildings of historical, architectural and cultural importance are accessible. In such cases it might be necessary for national authorities to allow some exceptions to this International Standard, as well as recommending appropriate alternative accessibility measures.

This International Standard should lead to continuous improvement in the built environment. Whilst the objectives always remain unchanged, the means of achieving them is part of a continuing process of change, i.e. as human knowledge and building technology improve and as the relationship between generally accepted building practice and technology alters.

ISO/IEC Guide 71 and its guidance document ISO/TR 22411 should be used to augment and assist in understanding the requirements of this International Standard.

Within the figures all dimensions are given in millimetres and measured from finished surfaces, unless otherwise stated. All figures are provided as examples.

Building construction — Accessibility and usability of the built environment

1 Scope

This International Standard specifies a range of requirements and recommendations for many of the elements of construction, assemblies, components and fittings which comprise the built environment. These requirements relate to the constructional aspects of access to buildings, to circulation within buildings, to egress from buildings in the normal course of events and evacuation in the event of an emergency. An informative annex is also included which deals with aspects of accessibility management in buildings.

This International Standard contains provisions with respect to features in the external environment directly concerned with access to a building or group of buildings from the edge of the relevant site boundary or between such groups of buildings within a common site. This International Standard does not deal with those elements of the external environment, such as public open spaces, whose function is self-contained and unrelated to the use of one specific building, nor does it deal with single family dwellings, other than those circulation spaces and fittings that are common to two or more such dwellings.

At present, consideration is being given to the development and publication of additional parts to this International Standard to deal with the types of external environments described above and single family dwellings.

For existing buildings there are options included in some paragraphs which appear as *"exceptional considerations for existing buildings in developing countries"* (see "Guidance on the Implications of the ISO Global Relevance Policy for CEN Standardization", 2005) and as *"exceptional considerations for existing buildings"* where a lesser standard than expected in new developments is accepted on the grounds of technical and economic circumstances only.

The dimensions stated in this International Standard, relevant to the use of wheelchairs, are related to the footprint of commonly used wheelchair sizes and users. The footprint for a wheelchair within this International Standard is based on ISO 7176-5 and ISO/TR 13570-2[1)] and is 800 mm wide and 1 300 mm long. For larger wheelchairs and scooters, dimensions will have to be considered accordingly.

NOTE This International Standard is primarily written for adults with disabilities but it includes some specifications regarding the specific accessibility requirements that would suit children with disabilities. However, it is envisaged that more detailed requirements will be included in future revisions of this International Standard.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4190-1:2010, *Lift (Elevator) installation — Part 1: Class I, II, III and VI lifts*

ISO 4190-5:2006, *Lift (Elevator) installation — Part 5: Control devices, signals and additional fittings*

1) Under preparation.