AS/NZS 3084:2017

Australian/New Zealand Standard™

Telecommunications installations—Telecommunications pathways and spaces for commercial buildings

STANDARDS Australia

STANDARDS NEW ZEALAND PAEREWA AOTEAROA

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CT-001, Communications Cabling for Commercial Buildings. It was approved on behalf of the Council of Standards Australia on 11 January 2017 and by the New Zealand Standards Approval Board on 13 December 2016.
This Standard was published on 15 February 2017.

The following are represented on Committee CT-001:

Australian Chamber of Commerce and Industry
Australian Communications and Media Authority
Australian Council of Trade Unions
Australian Digital and Telecommunications Industry Association
Australian Industry Group
Australian Information Industry Association
BICSI South Pacific—Australia
BICSI South Pacific—New Zealand
Communications Alliance
Energy Networks Association
Engineers Australia
Independent Chairperson
KNX National Group
Lighting Council Australia
National Electrical and Communications Association
Telecommunications Users Association of New Zealand

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.saiglobal.com or Standards New Zealand web site at www.standards.govt.nz and looking up the relevant Standard in the on-line catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of Standards Australia or the New Zealand Standards Executive at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS 3084:2016.

Australian/New Zealand Standard™

Telecommunications installations—Telecommunications pathways and spaces for commercial buildings

Originally as AS 3084—1993.
Jointly revised and designated as AS/NZS 3084:2003.
This edition 2017.

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, PO Box 1473, Wellington 6011.

ISBN 978 1 76035 656 9

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CT-001, Communications Cabling for Commercial Buildings, to supersede AS/NZS 3084:2003, *Telecommunications installations—Telecommunications pathways and spaces for commercial buildings (ISO/IEC 18010:2002, MOD)*. It is a complementary document to AS/NZS ISO/IEC 14763.2:2014 which replaced the content reproduced from ISO/IEC 18010:2002 and ISO/IEC 18010:2002 Amendment 1:2005 that was included in AS/NZS 3084:2003 (incorporating Amendment 1: 2007).

The objective of this Standard is to provide specific guidance to architects, planners, designers, engineers, builders, installers, maintenance personnel, building owners, managers and users in the planning and installation of physical pathways and spaces in and between buildings to accommodate the equipment and cabling infrastructure necessary for communications; to the extent that this is not adequately covered for Australian and New Zealand purposes in AS/NZS ISO/IEC 14763.2:2014.

In New Zealand, all references to any and all Australian documents need to be considered informative only where no equivalent New Zealand Standard is noted.

In conjunction with AS/NZS ISO/IEC 14763.2:2014, this Standard provides design procedures and construction practices which can be referenced in project specific construction contract documents created by (or for) Australian and New Zealand users of this document. The information has been significantly expanded and updated from AS/NZS 3084:2003.

The first version, AS 3084—1993, was developed from EIA/TIA-569-A, Commercial Building Standard for Telecommunications Pathways and Spaces. This USA Standard was developed with the support of the American Institute of Architects and the Construction Specifications Institute, since it influences both the design and construction of commercial buildings, where various building components are to be structured into facilities which are responsive to telecommunications needs.

Appendix A provides guidelines and practical examples for some of the topics covered in the body of this Standard. The material in Appendix A has been updated from Appendix ZC in AS/NZS 3084:2003.

It should be noted that this Standard has a special relationship to AS/NZS 3080, *Telecommunications installations—Integrated communications cabling systems for commercial premises*. It recognizes that both building cabling and architectural provisions of the building into which such cabling systems are installed need to be standardized.

In Australia a complementary document to this Standard is AS/CA S009, which details mandatory installation requirements for customer cabling in Australia where installations are to be connected to telecommunications carrier networks. Although compliance with AS/CA S009 is not a regulatory requirement in New Zealand, it is indicative of good practice and compliance with AS/CA S009 may be mandatory if it is referenced in contracts for customer cabling works.

AS/NZS 3000, Electrical installations (known as the Australian/New Zealand wiring rules) contains further general requirements for cabling pathways within buildings. In Australia only, AS/CA S008, Requirements for authorised cabling products, and AS/CA S009 Installation requirements for customer cabling (Wiring rules) provide mandatory requirements for telecommunications cabling products, including telecommunications conduit and pits and aerial cabling.

Some of the figures in this Standard are reproduced by courtesy of the following organizations:

Endeavour Energy (previously Prospect Electricity): Figure 7.1

Telstra Corporation: Figures 9.5, 9.6, 9.7, 9.8

The term ‘informative’ has been used in this Standard to define the application of the appendices to which it applies. An ‘informative’ appendix is only for information and guidance.

CONTENTS

Page

Page

FOREWORD

The telecommunications infrastructure is an integral part of building design. It may include voice, data, environmental control, security, audio, television, sensing, alarms, paging, extra-low voltage signal systems and other low voltage and power-limited signal systems. These systems are subject to frequent changes. Design of the pathways and spaces should accommodate this dynamic behaviour. This Standard may significantly influence the design of other building services, such as electrical power and heating, ventilation and air conditioning (HVAC) by virtue of sharing building spaces with those services, and also by requiring power and HVAC to service telecommunications and equipment rooms.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

Telecommunications installations—Telecommunications pathways and spaces for commercial buildings

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard provides specific guidance to architects, planners, designers, engineers, builders, installers, maintenance personnel, building owners, managers and users in the planning and installation of physical pathways and spaces in and between buildings to accommodate the equipment and cabling infrastructure necessary for communications; to the extent that this is not adequately covered for Australian and New Zealand purposes in AS/NZS ISO/IEC 14763.2:2014.

1.2 APPLICATION

1.2.1 General

This Standard applies to all types of commercial, government and public buildings located within a property boundary. It should also be applied to buildings and campus pathways on industrial, mining and transport sites and multi-dwelling residential and hospitality premises. It is intended to assist architects, planners, designers, engineers, builders, installers, maintenance personnel, building owners, managers and users in the planning of physical pathways and spaces in and between buildings to accommodate the equipment and cabling infrastructure necessary for telecommunications networks and related information, security, life safety, radio frequency, audio visual, control and building management systems.

Although it may provide a useful reference, this Standard does NOT explicitly apply to pathways and spaces—

(a) outside property boundaries and in public streets or public land, whether installed or operated by private network owners, developers or carriers; and

(b) within and around industrial process and utility plant and structures.

Adherence to this Standard will facilitate, by standardizing the approach, the provisioning and maintenance of the comprehensive communications facilities and networks which are in ever-increasing demand, particularly by occupiers of commercial premises.

1.2.2 Choice of design options

This Standard and AS/NZS ISO/IEC 14763.2 do not make specific recommendations among the design options available for telecommunications pathways. For example, the choice between an access floor versus ceiling distribution solution is not delineated. It is up to the telecommunications designer to properly select among the options based upon the applications at hand and the constraints imposed by the building or site design, developer or owner, and tenant.