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TIA STANDARD

Administration Standard for Telecommunications Infrastructure

ANSI/TIA-606-D
(Revision of TIA-606-C)

October 2021

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ADMINISTRATION STANDARD FOR TELECOMMUNICATIONS INFRASTRUCTURE

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Foreword

(This foreword is not part of this Standard)

Approval of this Standard

This Standard was approved by the Telecommunications Industry Association (TIA) Subcommittee TR-42.3, TIA Technical Engineering Committee TR-42, and the American National Standards Institute (ANSI).

TIA reviews standards every 5 years. At that time, standards are reaffirmed, rescinded, or revised according to the submitted updates. Updates to be included in the next revision of this Standard should be sent to the committee chair or to TIA.

Contributing organizations

More than 60 organizations within the telecommunications industry (including manufacturers, consultants, end users, and other organizations) contributed their expertise to the development of this Standard.

Documents superseded

This Standard replaces ANSI/TIA-606-C dated June 2017.

Significant technical changes from the previous edition

- 1) Moved Annex D on administration of remote powering to new clause 14
- 2) Updated content in new clause 14 on remote powering to make content normative and harmonize with TIA-5048 AIM Addendum 1 (ISO/IEC 18598 Addendum 1).

Relationship to other standards and documents

The following are related standards regarding various aspects of structured cabling that were developed and are maintained by Engineering Committee TIA TR-42.

- ANSI/TIA-568.0, *Generic Telecommunications Cabling for Customer Premises*
- ANSI/TIA-568.1, *Commercial Building Telecommunications Infrastructure Standard*
- ANSI/TIA-568.2, *Balanced Twisted-Pair Telecommunications Cabling and Components standard*
- ANSI/TIA-568.3, *Optical Fiber Cabling and Components Standard*
- ANSI/TIA-568.4, *Broadband Coaxial Cabling and Components Standard*
- ANSI/TIA-569, *Telecommunications Pathways and Spaces*
- ANSI/TIA-570, *Residential Telecommunications Infrastructure Standard*
- ANSI/TIA-607, *Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises*
- ANSI/TIA-758, *Customer-Owned Outside Plant Telecommunications Infrastructure Standard*
- ANSI/TIA-862, *Structured Cabling Infrastructure Standard for Intelligent Building Systems*
- ANSI/TIA-942, *Telecommunications Infrastructure Standard for Data Centers*
- ANSI/TIA-1005, *Telecommunications Infrastructure Standard for Industrial Premises*
- ANSI/TIA-1179, *Healthcare Facility Telecommunications Infrastructure Standard*

- ANSI/TIA-4966, *Telecommunications Infrastructure Standard for Educational Facilities*
- ANSI/TIA-5017, *Telecommunications Physical Network Security Standard*

Figure 1 is the schematic relationship between the ANSI/TIA-568 series and other relevant standards.

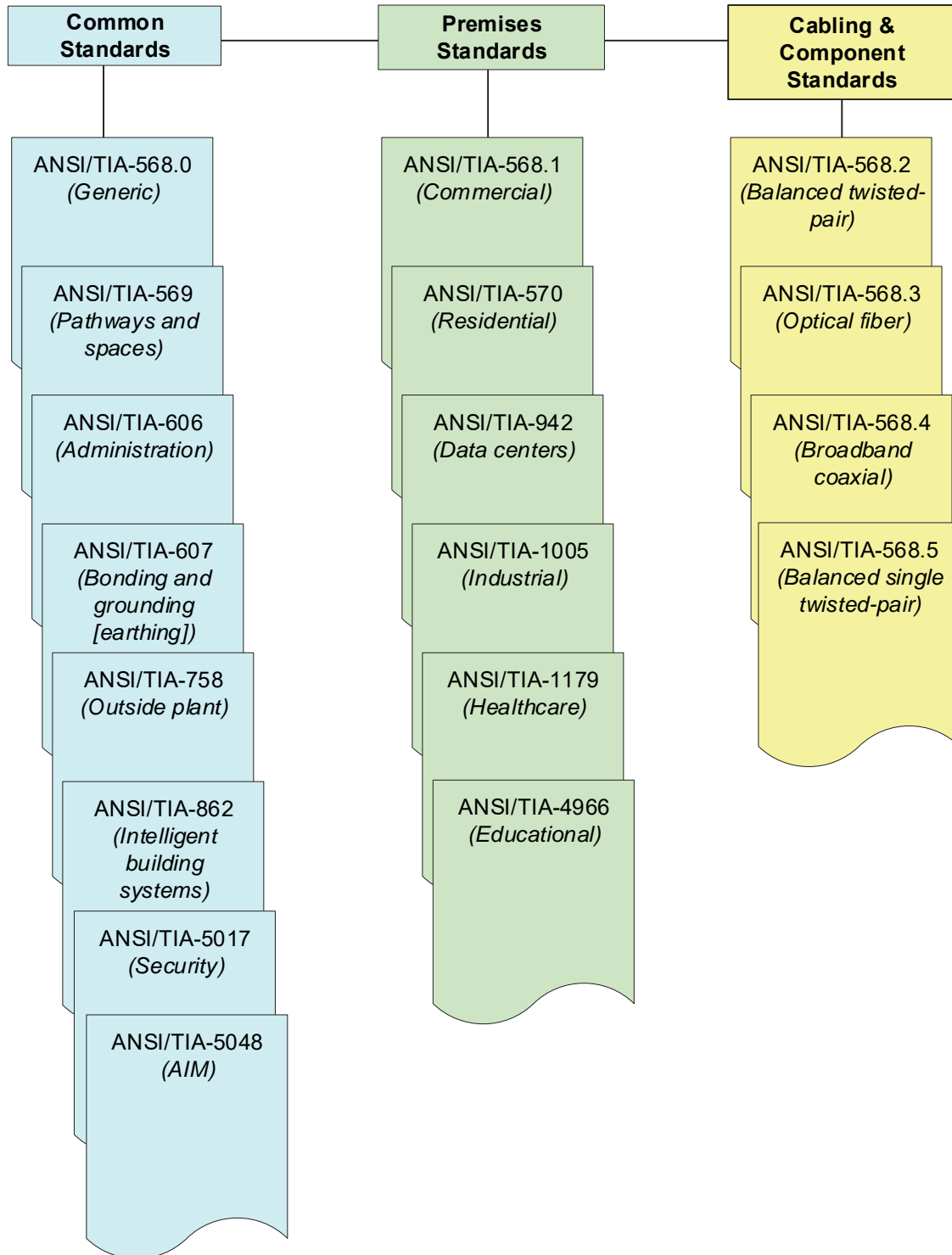


Figure 1 – Illustrative relationship between relevant TIA standards

Useful supplements to this Standard are the BICSI *Telecommunications Distribution Methods Manual*, the *Outside Plant Design Reference Manual*, and the *Information Technology Systems Installation Methods Manual*. These manuals provide recommended practices and methods by which many of the requirements of this Standard may be implemented.

Other references are listed in the Bibliography in Annex D.

Stencils used in figures

Some figures in this document were created using stencils developed by NetZoom. This use of NetZoom shall not be considered as an endorsement by TIA.

Annexes

Annexes A through D are informative and are not considered as requirements of this Standard.

Introduction

General

This Standard provides guidelines and choices of classes for the administration of the telecommunications infrastructure. The four classes of administration specified are based on the complexity of the infrastructure being administered. In addition, this Standard is modular and scalable to allow implementation of various portions of the administration system as desired. For example, a contractor placing the pathways may be responsible for recording pathway information. After the pathway has been placed, a different contractor installing the cabling may be responsible for recording cabling information. A third contractor might install firestopping and be responsible for recording information and labeling for that portion of the infrastructure. The system owner should coordinate among the various contractors to maintain a uniform method of administration as specified in this Standard.

Purpose

This Standard specifies administration for a generic telecommunications cabling system that will support a multi-product, multi-vendor environment. It also provides information that may be used for the design of administration products.

This Standard provides a uniform administration approach that is independent of applications, which may change several times throughout the life of the telecommunications infrastructure. It establishes guidelines for owners, end users, manufacturers, consultants, contractors, designers, installers, and facilities administrators involved in the administration of the telecommunications infrastructure.

Use of this Standard is intended to increase the value of the system owner's investment in the infrastructure by reducing the labor expense of maintaining the system, by extending the useful economic life of the system, and by providing effective service to users.

The concepts outlined in this Standard may be extended to other applications (e.g., building automation systems, security, and audio/visual) that are in harmony with the telecommunications topology.

Stewardship

Telecommunications infrastructure affects raw material consumption. The infra-structure design and installation methods also influence product life and sustainability of electronic equipment life cycling. These aspects of telecommunications infrastructure impact our environment. Since building life cycles are typically planned for decades, technological electronic equipment upgrades are necessary. The telecommunications infrastructure design and installation process

magnifies the need for sustainable infrastructures with respect to building life, electronic equipment life cycling and considerations of effects on environmental waste. Telecommunications designers are encouraged to research local building practices for a sustainable environment and conservation of fossil fuels as part of the design process.

Specification of criteria

Two categories of criteria are specified: mandatory and advisory. The mandatory requirements are designated by the word “shall”; advisory requirements are designated by the words “should,” “may,” or “desirable,” which are used interchangeably in this Standard.

Mandatory criteria generally apply to protection, performance, administration, and compatibility; they specify the absolute minimum acceptable requirements. Advisory or desirable criteria are presented when their attainment will enhance the general performance of the cabling system in all its contemplated applications.

A note in the text, table, or figure is used for emphasis or for offering informative suggestions.

Metric equivalents of US customary units

The dimensions in this Standard are metric or US customary with approximate conversion to the other.

Life of this Standard

This Standard is a living document. The criteria contained in this Standard are subject to revisions and updating as warranted by advances in building construction techniques and telecommunications technology.

Use of legacy identifier formats

This Standard specifies two identifier formats, one fully backward compatible with legacy TIA-606-A identifiers and one based on TIA-606-A, but modified to be compatible with the ISO/IEC TR 14763-2-1 identifiers.

Additionally, this standard specifies identifier formats for telecommunications bonding and grounding system elements using terms compatible with the current version of ANSI/TIA-607. However, identifier formats using terms compatible with earlier revisions of TIA-607 may also be used.

Elements of a generic telecommunications infrastructure

Figure 2 illustrates a representative model for generic telecommunications infrastructures for which this Standard specifies an administration system. The elements illustrated include:

- a) Cabling Subsystem 1 pathways and cabling;
- b) Cabling Subsystem 2 and 3 pathways and cabling;
- c) telecommunications bonding and grounding;
- d) spaces (e.g., entrance facility, telecommunications room, equipment room); and
- e) firestopping.

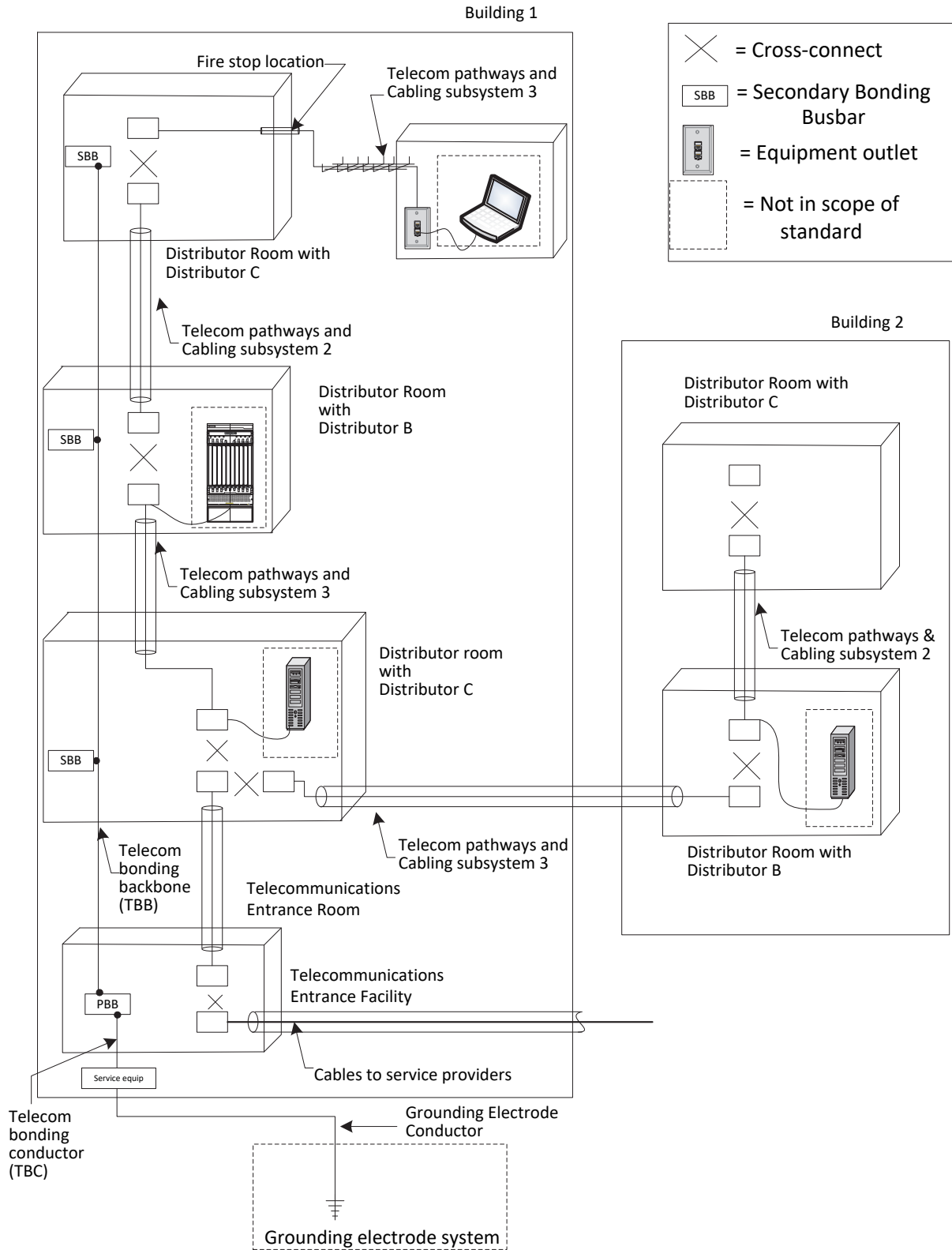


Figure 2 – A representative model of typical telecommunications infrastructure elements for administration

1 SCOPE

This Standard specifies administration systems for telecommunications infrastructure within buildings (including commercial, industrial, residential, and data center premises) and between buildings. This infrastructure may range in size from a building requiring a single telecommunications space (TS) and associated elements, to many TSs and associated elements in multiple campus locations. This Standard applies to administration of telecommunications infrastructure in existing, renovated, and new buildings.

This Standard addresses the administration of telecommunications infrastructure by:

- a) assigning identifiers to components of the infrastructure
- b) specifying elements of information that make up records for each identifier
- c) specifying relationships between these records to access the information they contain
- d) specifying reports presenting information on groups of records
- e) specifying graphical and symbolic requirements

2 NORMATIVE REFERENCES

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

- a) ANSI/TIA-568.0, *Generic Telecommunications Cabling for Customer Premises*
- b) ANSI/TIA-568.3, *Optical Fiber Cabling and Components Standard*
- c) ANSI/TIA-5048, *Automated Infrastructure Management (AIM) Systems – Requirements, Data Exchange and Applications*
- d) EIA/ECA-310, *Cabinets, Racks, Panels, and Associated Equipment*
- e) IEC 60297-3-100, *Mechanical Structures for Electronic Equipment – Dimensions of Mechanical Structures of the 482,6 mm (19 in) Series – Part 3-100: Basic Dimensions of Front Panels, Subracks, Chassis, Racks and Cabinets*
- f) ISO/IEC TR 14763-2-1, *Information Technology - Implementation and Operation of Customer Premises Cabling - Part 2-1: Planning and Installation - Identifiers within Administration Systems*