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**Information and Communication
Technology Systems Design and
Implementation Best Practices for
Educational Institutions and Facilities**



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Information and Communication Technology Systems Design and Implementation Best Practices for Educational Institutions and Facilities

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PREFACE

Revision History

- April 13, 2009** First publication of this standard, titled ANSI/BICSI 001-2009, *Information Transport Systems Design Standard for K-12 Educational Institutions*
- January 11, 2017** Complete revision of ANSI/BICSI 001-2009, retitled and published as ANSI/BICSI 001-2017, *Information and Communication Technology Systems Design and Implementation Best Practices for Educational Institutions and Facilities*
- August 1, 2022** Five year reapproval published with designation of ANSI/BICSI 001-2017 R22 No revisions or changes were made.

Document Format (Usability Features)

This standard is considered a complete revision. As such, additions, changes, and deletions to the previous text are not marked or indicated.

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1 Introduction

1.1 General

The telecommunications cabling, pathways and spaces infrastructure for educational facilities often requires a more diverse approach to design considerations than what is used in a commercial office building. Teachers and students may take advantage of a multitude of network resources that serve to aid in the students' educational experience. Educational facilities and campuses may contain commercial, industrial, data center, healthcare, and entertainment environments.

In addition to the needs of the cabling, pathways and spaces for an educational building, facility, or campus, consideration should be given to other facility demands such as:

- Electronic equipment electrical requirements
- Audio system clarity for outdoor, building-wide, and in-classroom systems
- Distance learning (e.g., cameras, audio)
- Video distribution, video display, and production
- Electronic safety and security
- Intelligent building management systems
- Administration and office staff

1.2 Categories of Criteria

Two categories of criteria are specified - mandatory and advisory.

- 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 ESS system infrastructure in all its contemplated applications.

Mandatory requirements are designated by the word *shall*; advisory recommendations are designated by the words *should*, *may*, or *desirable*, which are used interchangeably in this standard. When possible, recommendations and requirements were separated to aid in clarity.

2 Scope

This standard provides requirements, recommendations, and best practices for the design and implementation of information technology systems and their infrastructure for educational institutions and facilities. Educational facilities include, but are not limited to, public and private educational institutions and facilities serving primary, secondary, and post-secondary levels of education, as well as preschool facilities, vocational training institutions, and specialty training facilities (e.g., teaching hospitals, broadcasting schools).