

Standard for
**Installing Commercial Building
Telecommunications Cabling**



Published by
National Electrical
Contractors Association



Jointly developed with
BICSI®—
A Telecommunications Association



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1. Scope

1.1 Products and Applications Included

A structured cabling system is a complete collective configuration of cabling and associated hardware on a premises which, when installed, provides a comprehensive telecommunications infrastructure. This infrastructure is intended to support a wide range of telecommunications services such as telephone and computer networks. Figure 1 illustrates an example of components that comprise a structured cabling system.

This Standard describes minimum requirements and procedures for installing the infrastructure for telecommunications including balanced twisted pair copper cabling and optical fiber cabling that transport telecommunications signals (e.g., voice, data, video). Installers should always follow applicable codes and manufacturers' instructions. This Standard is intended to be used in describing a "neat and workmanlike manner" as referenced by ANSI/NFPA 70, the National Electrical Code (NEC).

1.2 Regulatory and Other Requirements

a) All information in this publication is intended to conform to the National Electrical Safety Code (ANSI/IEEE C2) and National Electrical Code (ANSI/NFPA 70). Installers should always follow the NESC, NEC, applicable state and local codes, manufacturer's instructions, and contract documents when installing telecommunications cabling.

b) Only qualified persons familiar with telecommunications cabling should perform the work described in this publication. It is recommended that all work be performed in accordance with NFPA 70E, *Standard for the Electrical Safety in the Workplace*.

c) General requirements for installing electrical products and systems are described in the latest version of NECA 1, *Standard Practices for Good Workmanship in Electrical Contracting* (ANSI). Other *NEIS* provide additional guidance for installing particular types of electrical products and systems. A complete list of *NEIS* is provided in Annex B. The installation should follow the NEC, applicable state

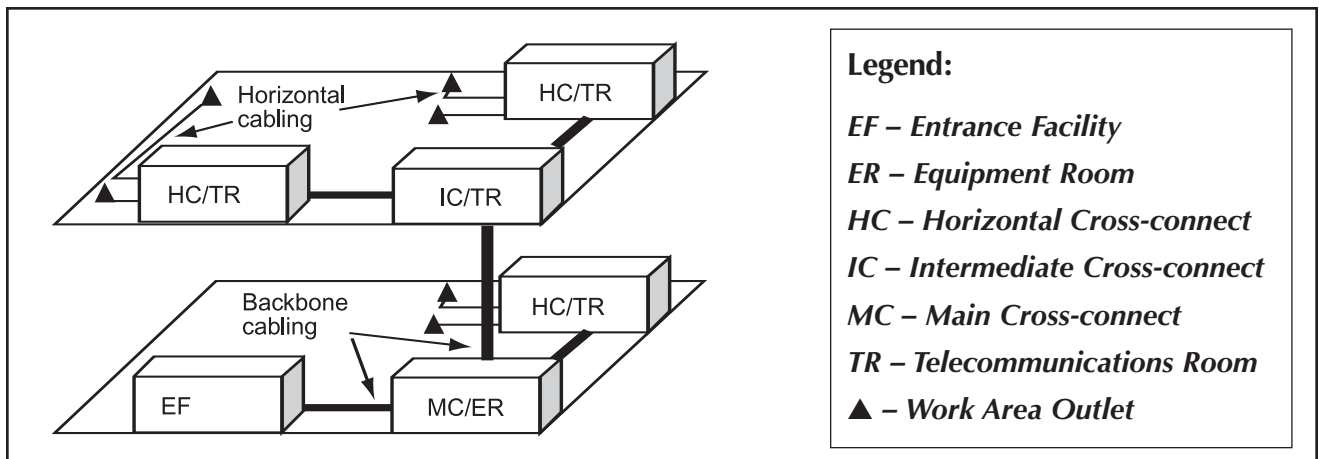


Figure 1—Example of structured cabling system

and local codes, and manufacturers' instructions for the installation of electrical and telecommunications products and systems.

d) Information within this standard is intended to comply with the following standards.

- ANSI/NFPA 70-2005; *National Electrical Code*
- ANSI/TIA 455-78-B-2002; *Optical Fibres – Part 1-40: Measurement Methods and Test Procedures – Attenuation*
- ANSI/TIA 598-C-2005; *Optical Fiber Cable Color Coding*
- ANSI/TIA 526-7-1998; *Optical Power Loss Measurements Of Installed Single-mode Fiber Cable Plant*
- ANSI/TIA 526-14-A-1998; *Optical Power Loss Measurements Of Installed Multimode Fiber Cable Plant*
- ANSI/TIA 568-B Series-2001; *Commercial Building Telecommunications Cabling Standard*
- ANSI/TIA 606-A-2002; *Administration Standard for the Telecommunications Infrastructure of Commercial Buildings*
- ANSI/J-STD 607-A-2002; *Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications*
- ANSI/TIA 569-B-2004; *Commercial Building Standard for Telecommunications Pathways and Spaces*
- TIA/TSB 140-2004; *Additional Guidelines for Field-Testing Length, Loss and Polarity of Optical Fiber Cabling Systems*

erning authority. Most of the code requirements for the job should be included in the scope of work documents. The installer should never take this information for granted, since the telecommunications contractor is fully responsible for all work done on the project.

If no code has been adopted locally, consult with the fire marshal's office to determine what agency is responsible for that geographic area and what codes are in effect. Do not depend on other installers, contractors, or even company personnel in making these determinations.

1.3 Local code requirements

Local code requirements shall be followed. Always review the local code requirements with the local AHJ before proceeding with the installation. This includes reviewing what code and edition is adopted, and what, if any, exceptions to the code are adopted by the gov-