



Oklahoma Uniform Building Code Commission
Construction Industries Board/OUBCC
2401 NW 23rd St., Suite 2F,
Oklahoma City, OK 73107

OUBCC's Adoption of the 2017 National Electrical Code®

To Oklahoma Uniform Building Code Commission,

Thank you for requesting comments on the adoption of the proposed rules. Cisco Systems is a global technology company that develops, manufactures and sells networking hardware, telecommunications equipment and technology services. For these reasons, Cisco is a stakeholder in OUBCC's adoption of the 2017 National Electrical Code (NEC). I am a member of the National Fire Prevention Association, a Principal Member of NEC Code Making Panel 3, and a member of the Task Group which authored the TIAs for the 2017 code cycle.

Cisco is requesting that OUBCC implement TIA 17-10, which aligns Chapter 7 with Chapter 8 in the 2017 version of the NEC and corrects an oversight in the Code that allows unsafe conditions. TIA 17-10 was the first in a set of three companion TIAs (along with TIA 17-11 and TIA 17-12) that resulted from the work of a Correlating Committee Task Group. The three TIAs worked together to fix the oversight in the 2017 NEC. The OUBCC proposal implements TIA 17-11 and partially implements TIA 17-12. It is problematic to partially implement the solution. I am including descriptions of the three TIA's below and how they are implemented in the OUBCC proposal (attachment 1). I also include TIA 17-10 in its entirety (attachment 2).

I would further note that the topic covered in 725.144 was new to the 2017 Code and underwent considerable change between 2017 and 2020. The main goal was to simplify the text for installation and inspection. I propose that OUBCC consider using the 2020 version of 725.121(C), 725.144, and 840.160.

Thank you for your time and consideration.

Regards,

A handwritten signature in black ink, appearing to read "Chad Jones".

Chad Jones
Technical Leader, Cisco Systems
Principal, Code Making Panel 3

Attachment 1

Description of the TIAs and their implementation in the OUBCC proposal

TIA 17-10 makes modifications to 725.2, 725.121, and 725.144(A). This TIA adds the definition for nominal current to section 725, adds some important labeling requirements in 725.121, and aligns 725.144(A) with the modifications to 840.160.

TIA 17-11 made changes to 725.144(B) and are included in the proposed OUBCC's modifications to the 2017 NEC on page 17 under item (5).

TIA 17-12 made changes to section 840 and are partially included in the proposed OUBCC's modifications to the 2017 NEC on page 19 under item (2). I will note that TIA 17-12 also adds a definition for nominal current to 840.2 that is not included in the proposed modifications. I will further note that the term nominal current is included to the modifications to 840.160 and therefore should be included. (Exception: Compliance with 725.144 shall not be required for installations of listed 4-pair communications cables where the ***nominal current*** does not exceed 0.3 amperes in any conductor.)

Attachment 2

TIA 17-10 (found at: https://www.nfpa.org/assets/files/AboutTheCodes/70/TIA_70_17_10.pdf)

Reference: 725.2, 725.121(C), and 725.144(A)

TIA 17-10

(SC 17-12-7 / TIA Log #1299)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 70®, *National Electrical Code*®, 2017 edition. The TIA was processed by the National Electrical Code Panel 3 and the NEC Correlating Committee, and was issued by the Standards Council on December 6, 2017, with an effective date of December 26, 2017.

A Tentative Interim Amendment is tentative because it has not been processed through the entire standards-making procedures. It is interim because it is effective only between editions of the standard. A TIA automatically becomes a public input of the proponent for the next edition of the standard; as such, it then is subject to all of the procedures of the standards-making process.

1. Add a new definition to 725.2 to read as follows:

725.2 Definitions.

Nominal Current. The designated current per conductor as specified by equipment design.

Informational Note: One example of nominal current is 4-pair Power over Ethernet (PoE) applications based on IEEE 802.3-2015, IEEE Standard for Ethernet, that supplies current over 2 or 4 twisted pairs. The nominal current for 60-watt PoE power-sourcing equipment is 0.3 amperes per conductor, where the current in one conductor can be 0.36 amperes and another conductor can be 0.24 amperes.

2. Revise 725.121(C) to read as follows:

725.121(C) Marking. The power sources for limited power circuits in 725.121(A)(3) and limited power circuits for listed audio/video, information, and communications technology (equipment), and listed industrial equipment in 725.121(A)(4) shall have a label indicating the maximum voltage and maximum current or maximum voltage and nominal current output for each connection point. Where multiple connection points have the same rating, a single label shall be permitted to be used. The effective date shall be January 1, 2018.

Exception: Marking shall not be required for power sources providing 0.3 amperes nominal current or less per conductor.

3. Revise 725.144(A) to read as follows:

725.144(A) Use of Class 2 or Class 3 Cables to Transmit Power and Data. Where Types CL3P, CL2P, CL3R, CL2R, CL3, or CL2 transmit power and data, ~~the following shall apply, as applicable:~~
~~(1) The~~ the ampacity ratings in Table 725.144 shall apply to the nominal current at an ambient

temperature of 30°C (86°F). ~~(2)~~ For ambient temperatures above 30°C (86°F), the correction factors of 310.15(B)(2) shall apply.

Exception: Compliance with Table 725.144 shall not be required for installations where the nominal current does not exceed 0.3 amperes in any conductor.

Issue Date: December 6, 2017

Effective Date: December 26, 2017