National Electrical Code® Handbook

Fourteenth Edition

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With the complete text of the 2017 edition of NFPA 70°, National Electrical Code®



NATIONAL FIRE PROTECTION ASSOCIATION

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Dedication



This edition of the *National Electrical Code*[®] *Handbook* is dedicated to Michael J. Johnston for his outstanding leadership during both the 2014 and 2017 revision cycles of the *NEC*[®]. While Mike continues as chair of the NEC Correlating Committee through the 2020 edition of the *NEC*, his leadership has been so exceptional that we chose to honor him before the end of his tenure. He is a true leader, with unwavering dedication to the mission and the people who make it all happen.

The 2017 *NEC* revision cycle brought extraordinary changes to how the work gets done. Mike's exemplary organizational and communication skills ensured that our panel members and correlating committee members were well prepared to embrace the changes and complete their all-important

work of revising the *NEC*. Mike was ahead of the curve by being a strong advocate for training on the new process and for the use of task groups to help the committees work more efficiently, including mock meetings with monitored replays online, which enabled participants to get their questions answered.

Mike is the executive director of standards and safety at the National Electrical Contractors Association (NECA), where he has been for eight years. He previously served as director of education codes and standards for the International Association of Electrical Inspectors (IAEI) for ten years. His diverse electrical background and his work with NECA and IAEI have empowered Mike to effectively communicate across many industry segments. As a result, his educational programs have long been recognized as being among some the best in the field. His dedication to training and the electrical industry has resulted in numerous recognitions, including the Artie's Apple Award from the Southwestern Section of IAEI, as well as the prestigious Gold Road Runner pin for his long-standing dedication to *NEC* education through IAEI.

Mike has authored a number of books at NECA and IAEI, including *Significant Changes* to the 2011 and 2014 NEC and several editions of the Analysis of Changes to the National Electrical Code. He has also worked on the Electrical Training Alliance s Applied Grounding & Bonding and Soares Book on Grounding and Bonding. During his time at NECA, numerous new standards have been added to the National Electrical Installation Standards (NEIS) library. Mike is an active member of ANSI, IAEI, NFPA, SES, ASSE, ANSI-EVSP, ANSI-EXSC, the UL Electrical Council, and the National Safety Council. He is the vice-chair of the NFPA Electrical Section and also served as chair of NEC Code-Making Panel 5 for the 2011 cycle. Mike has also served as an electrical inspector, an inspection field supervisor, a journeyman, and a master electrician.

It is often said that great leaders lead by example and recognize that they cannot do the job alone. Mike has been a master at selecting the right leaders and delegating responsibilities for training activities, ongoing technical issues needing resolution, and new technical areas, many of which have resulted in significant additions in the 2014 and 2017 editions of the *NEC*. Under Mike's leadership, the changes in the revision process have been effected and, more importantly, the *NEC* has been positioned to keep pace with today's dynamic electrical industry. The editors wish to thank Mike for his leadership and untiring dedication to the *NEC* and for all the help he has provided to us. It is with extreme pleasure that we proudly dedicate this, the 2017 edition of the *National Electrical Code Handbook*, to Michael J. Johnston.