

## 2014 NEC Significant Changes

The vast majority of the many 2014 NEC revisions are insignificant editorial modifications and relocations of text. The following discussion includes significant changes only.

Changes to local amendments:

1. Section 700.19 *Multiwire Branch Circuits* is new to the NEC. The code committee amended the section by adding an exception clarifying the application of this new requirement to existing installations. Without the amendment the NEC change could require thousands of dollars of additional work on commercial lighting system upgrades and minor tenant remodels.
2. Section 702.5 transfer switch requirements were amended to require 3 pole switches for all portable generator connections instead of allowing both 2 and 3 pole types. The reason is a 2 pole transfer switch cannot always be wired correctly with all types of portable generators on the market. A 3 pole type switch can be wired correctly regardless of the type of generator. **Cost difference between 2 and 3 pole switches?**
3. An amendment was added to section 620.71 (A) requiring protection for new recessed wall mounted elevator controllers due to incidents of accidental damage caused by other trades and building owners. The requirement applies when there is less than 1.25 inches of clearance between the back of the controller and the interior surface of the wall sheathing. The cost of this protection is minimal.
4. Section 310.15 (B) was amended by inserting the 2011 NEC language and table because the changes in 2014 made the rule much more confusing without changing intent. Hopefully the NEC will clean up the language so we can delete this amendment in next code cycle. This amendment is intended to prevent contractors or homeowners from installing larger conductors than required due to misinterpretation.
5. Section 250.122(B) addresses the sizing of the ground wire when the current carrying conductor is increased in size. The requirement was modified and clarified to make it easier for engineers and contractors to understand and meet the NEC requirements.
6. Under section 210.12, two of the six types of arc-fault protection methods have been deleted by local amendment because the methods are unworkable from an installer and inspection point of view and have a high likely hood of being accidentally defeated by a homeowner.

Significant changes to the NEC include:

1. Under section 110.26 (E) (2) dedicated clear space for electrical equipment has been expanded to include outdoor locations. Care will be required by designers and other trades to not encroach on these specific outside areas.

2. A revision to section 210.8 requires all laundry room and dishwasher 120Volt receptacles to be GFCI protected. This adds generally two GFCI receptacles per dwelling.
3. A revision to section 210.12 expands the types of devices and methods to provide arc-fault circuit-interrupter (AFCI) protection. The revisions provide more options for installers and should not add significant cost.
4. Section 210.12 is revised to require AFCI protection in the dwelling unit kitchen area. This will add the cost of four to five more AFCI devices per dwelling.
5. A new exception to section 210.12 (B) provides relief from the requirement for AFCI circuits when house panels are being replaced. This will save hundreds of dollars in just equipment cost on panel repairs and upgrades.
6. Section 210.12 (C) has been added to require AFCI protection in dormitory areas. This will add the cost for AFCI versus standard breakers in many places in dormitories. Note however that Anchorage sees very little dormitory construction.
7. Section 310.15(B) (3) (c) has been revised to allow the use of XXHW type wire on roof top surface instead of having to de-rate the installation. This will be a huge cost savings especially on remodels and roof repairs.
8. Article 393 has been added to allow for low-voltage suspended ceiling power distribution systems. This provides more options for designers and building owners.
9. Section 406.9(B)(1) has been revised to require extra duty covers on almost all outdoor receptacles. This should not be much of a cost increase as manufactures get the covers marked and listed to the tougher standard.
10. Section 517.18 & 19 has been revised to greatly increase the number of required receptacles in hospital bed, critical care and operating locations.
11. Sections 700.28 & 701.27 have been revised to require *selective coordination* be designed by a qualified engineer and be provided to the Authority Having Jurisdiction. The section clearly states what is required on emergency and legally required power systems.