

Town of Sahuarita

**AMENDMENTS TO THE
NATIONAL ELECTRIC CODE
2005 EDITION**

The following provisions of the National Electric Code, 2005 Edition, as published by the National Fire Protection Association Inc. are hereby revised as follows:

Section 210.5. Identification for Branch Circuits. Change paragraph (C) to read:

“(C) Ungrounded Conductors. Branch circuits shall conform to the following color Code:

<u>Volts</u>	<u>Phase</u>	<u>System</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>	<u>Grounded Conductor</u>
120/208	3	WYE	Black	Red	Blue	White
277/480	3	WYE	Brown	Orange	Yellow	Grey
120/240	3	Delta	Black	Orange	Red	White

Exception No. 1: The above color coding is not required in residential occupancies.

Exception No. 2: Industrial occupancies holding a Registered Plant Permit may use their own coding system.

Exception No. 3: Additions to an existing electrical system, where an acceptable color coding system exists, the existing color coding system shall be continued.

Section 210.8.

(B) Other than Dwelling Units. Revise as follows:

Change “15- and 20-ampere receptacles installed in the locations specified in (1) through (5)” to read “15- and 20-ampere receptacles installed in the locations specified in (1) through (6)”.

Add “(6) Convenience receptacles located within 6 feet of any sink or washbasin.”

Section 210.11.

(C) Dwelling Units. Revise as follows:

Add: “**(4) Dishwasher and Garbage Disposer Branch Circuits-Dwelling Units.** In residential occupancies, dishwasher and garbage disposer may be on the same 20-ampere branch circuit.”

Add the following new section:

“220.89. Optional Calculation – Non-dwelling Unit Occupancies. The calculation of feeder or service load in non-dwelling unit occupancies shall be permitted to be calculated in accordance with Table 220.89 in lieu of Part II of this article. This section shall not apply to calculations performed under Sections 220.86, 220.87, or 220.88. Calculations for this section shall be prepared by a registered electrical engineer.”

Add the following new table:

Table 220.89
Optional Method-Demand Factors for
Non-Dwelling Unit Occupancies

Connected Loads from Part II, Article 220	Demand Factors¹ (Percent)
Connected load up to and including 800 amperes	100
Connected load over 800 amperes	90

Footnote:

¹Other demand factors may be permitted at the discretion of the Building Official.

Section 225.32. Location. Revise as follows:

Add: "Exception No. 5: For freestanding canopies, carports, towers, and similar structures, a branch circuit disconnecting means shall be permitted to be located elsewhere on the premises. A bonding conductor sized per Section 250.122 shall be run with the circuit conductors."

Section 230.40. Number of Service-Entrance Conductor Sets. Revise as follows:

Delete Exception No. 1, in its entirety and replace with:

"Exception No. 1: For multiple-occupancy buildings, not more than two groups of one to six disconnects shall be permitted to be tapped from a single service drop or set of service lateral conductors. When mounted in individual enclosures, the groups of one to six disconnects shall be separated by not more than six feet. Signage shall be installed indicating the total number of disconnects for the structure. The meter and disconnect for circuits described in 210-25 shall be counted as one of the disconnects."

Delete Exception No. 4, in its entirety.

Change "Exception No. 5" to read "Exception No. 4".

Add the following new section:

"Section 230.63 Enclosures. Section 230.63 Enclosures. All service equipment rated 1000 Amperes or more located inside a building shall be enclosed within a room or space separated from the rest of the building by not less than one-hour fire resistive assembly in compliance with the Building Code."

Section 230.70

(B) Marking. Revise as follows:

Add the following two sentences:

"The markings shall be of sufficient durability to withstand the environment involved. Identifying labels required for disconnecting means shall have engraved or raised letters and be secured by screws or rivets (plastic tape shall not be considered durable material)."

Section 250.118: Types of Equipment Grounding Conductors. Revise as follows:

Delete items (5), (6), (7) and (8).

Table 310.5. Minimum Size of Conductors. Revise as follows:

Delete Table 310.5 in its entirety and replace with:

Table 310.5

Voltage Rating of Conductor (Volts)	Minimum Conductor Size – AWG
0 through 2,000	14 Copper 12 Copper-Clad Aluminum 8 Aluminum
2,001 through 8,000	8
8,001 through 15,000	2
15,001 through 28,000	1
28,001 through 35,000	1/0

Section 340.10 Uses Permitted. Revise as follows:

At the end of the section, add:

“(8) Type UF Cable shall be permitted to be used in mortar joints of adobe construction in occupancies where the use of Nonmetallic Sheathed Cable is permitted by this code.”

Section 348.60 Grounding and Bonding. Revise as follows:

Delete in its entirety and replace with:

“**348.60 Grounding and Bonding.** Flexible metal conduit shall not be permitted as a grounding means. An equipment grounding conductor, sized in accordance with Table 250.122, shall be installed in all flexible metal conduit. Where an equipment bonding jumper is required around flexible metal conduit, it shall be installed in accordance with Section 250.102.

Exception: Listed and labeled factory assembled (prewired) fixtures and equipment with flexible metal conduit will not require the addition of the grounding conductor in the prewired raceway.”

Section 350.10 Uses Permitted. Revise as follows:

At the end of the section, add:

“(4) for feeders.”

Section 350.60 Grounding and Bonding. Revise as follows:

Delete this section in its entirety and replace with:

“**350.60 Grounding and Bonding.** Liquidtight flexible metal conduit shall not be permitted as a grounding conductor. A conductor (as determined by Table 250.122) shall be installed in all liquidtight flexible metal conduit. Where an equipment bonding jumper is required around liquidtight flexible metal conduit, it shall be installed in accordance with Section 250.102. Exception: Listed and labeled factory assembled (prewired) fixtures and equipment with liquidtight flexible metal conduit will not require the addition of the grounding conductor in the prewired raceway.”

Section 352.12 Uses Not Permitted. Revise as follows:

At the end of this section add:

“(G) **Exterior Locations.** Where exposed in exterior locations.
Exception: Schedule 80 PVC may be used exposed out of doors.”

Section 410.16 Means of Support.

(C) Suspended ceilings. Revise as follows:

At the end of the paragraph add:

- “(1) Mount luminaires (fixtures) installed in acoustical tile or lay-in panel ceilings in a manner that will not compromise ceiling performance.
- “(2) Pendant luminaire (fixture) hangers attached to main or cross runners shall have approved support direct from structure.
- “(3) Luminaires (fixtures) weighing less than 25.5kg (56 pounds) shall have two No.

12 gage hangers connected from the luminaire (fixture) housing to the structure above. These wires may be slack.

(4) Luminaires (fixtures) weighing over 25.5kg (56 pounds) shall be supported directly from structure with approved hangers.

Sec. 422.12. Central Heating Equipment. *Revise as follows:*

Add this sentence to the end of the paragraph:

“Evaporative cooler fan and pump motors shall be permitted to be connected to the same branch circuit as the heating equipment when the controls do not permit the evaporative cooler and the heating to operate at the same time or the air distribution system is designed to not have the evaporative cooler and the heating equipment operating at the same time.”

Sec. 440.65. Leakage Current Detection and Interruption and Arc Fault Circuit Interrupter. *Delete section in its entirety.*

Sec. 501.30(B). Types of Equipment Grounding Conductors. *Revise as follows: Delete Exception, including (1), (2), and (3).*

Sec. 502.30(B). Types of Equipment Grounding Conductors. *Revise as follows: Delete Exception, including (1), (2), and (3).*

Sec. 503.30(B). Types of Equipment Grounding Conductors. *Revise as follows: Delete Exception, including (1), (2), and (3).*

Sec. 680.26 Equipotential Bonding.

(C) Equipotential Bonding Grid. *Revise as follows:*

Add this sentence to the end of subsection (3) b:

“Where the pool design does not call for reinforcing in the pool shell or deck this section does not require the installation of reinforcing steel.”

Add the following new section:

Sec. 725.12. Location of Power Supplies and Transformers.

(A) Accessibility. *Class 1, Class 2 and Class 3 power supplies and transformers shall be accessible.*

(B) Prohibited locations.

1) In any closet or storage space within 6 inches of the front of the shelf.