

### **BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

# Amendment to 2023 National Electrical Code (NEC) Section 230.67

Submitted by: Home Builders Association of Central Arizona

**SECTION: 230.67 SURGE PROTECTION DEVICE** 

2023 NEC 230.67 (E3606.5 Surge Protection) (remove the entire section)

#### Justification:

This amendment removes the requirement for all services supplying dwelling units to be provided with a surge protective device. This requirement would put residents, especially seniors, at risk if the breaker surge protector needs to be reset when activated during severe weather conditions, such as often occurs during Arizona's monsoon season.

From NAHB and HBACA - Adequate substantiation was not provided to clearly identify a risk to equipment or safety concern to warrant this requirement being added to the 2020 NEC. Surge protection devices (SPDs) are currently permitted by the code and can provide a value to the end user, but it should remain up to the consumer as to whether the benefit is worth the investment. There are also potential issues with mandating currently available surge-protection products in all cases.

In addition to the overall problems of this provision, the 2023 NEC added the requirement that SPDs need to have a nominal discharge current rating of 10kA minimum. The National Electrical Manufacturers Association (NEMA) that represents the manufacturers of these devices submitted an amendment to remove the 10kA rating. In their testimony, they said the following: "The currently proposed revisions would confuse installers, specifiers, and inspectors who are familiar with interrupting ratings, and short circuit current ratings. It would inappropriately encourage them to require a nominal discharge current equal to or greater than the available short circuit current, under the mistaken belief that this would assure compliance with manufacturers' installation and use instructions, as required by NEC Section 110.3(B), or with short circuit current ratings - rating requirements of relevant 2023 NEC Sections." Another company that manufacturers electrical devices claimed that the minimum rating of 10kA backed by certain members of the industry "represents an unwarranted exclusion of products offered by many other industry providers and stakeholders." These products that are now excluded have ratings permitted by their listing with UL Solutions (previously Underwriters Laboratories) and, until now, were compliant with the NEC. This requirement severely limits market choice by reducing the number of manufacturers offering compliant SPDs from about a dozen to just four. This is especially concerning in this time when supply chain difficulties already make it difficult to procure electronic devices and increase their cost substantially. There is also no guarantee that SPDs remain in service, further negating any possible advantages of this new mandate. This becomes a costly requirement without a means to determine the benefit for the user. It is not necessary to mandate the protection just in case a consumer has a transient incident. During the code development process for the 2020 NEC, several public comments were rejected to expand the surge-protection requirement to all

| occupancies and multiple levels of protection because they lacked substantiation. The same reason should be applied to remove this section as well.   |
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| Similar amendments have been adopted in Maine, North Dakota, Oregon, and South Carolina and other jurisdictions in Arizona.   |
| Cost Impact: No cost impact.  |
| Staff Committee Rationale for Recommendation: The NEC Committee recommends this proposed amendment be denied. The concern noted regarding the loss of power due to the SPD was not substantiated as if a breaker did trip, it would be only the breaker serving the SPD and should not affect power to the rest of the panel. |
| Approved in previous 2018 Code Adoption process: ☐ YES ☒ NO   |
| ACTION TAKEN:   |
| <b>2024 Code Committee</b> Date: 1/7/2025   |
| Approved as submitted Modified and approved Denied No action taken  |
| Development Advisory Board (DAB) Subcommittee Date: 3/20/2025   |
| Approved as submitted Modified and approved Denied No action taken  |
| Development Advisory Board (DAB)  Date:   |
| Approved as submitted  Modified and approved  Denied  No action taken   |
| Transportation, Infrastructure and Planning Subcommittee Date:  |
| Approved as submitted Modified and approved Denied No action taken  City Council Action  Date:  |
| City Council Action  □ Approved as submitted □ Modified and approved □ Denied □ No action taken   |



#### **BUILDING CONSTRUCTION CODE CHANGE PROPOSAL**

## Amendment to 2023 National Electrical Code (NEC) Section 406.9(C)

Submitted by: Home Builders Association of Central Arizona

#### SECTION: 406.9(C) BATHTUB AND SHOWER SPACES

Receptacles shall not be installed inside of the tub or shower or within a zone measured 900 mm (3 ft) horizontally from any outside edge of the within or directly over a bathtub or shower stall, including the space outside the bathtub or shower stall space below the zone.

The zone also includes the space measured vertically from the floor to 2.5 m (8 ft) above the top of the bathtub rim or shower stall threshold. The identified zone is all-encompassing and shall include the space directly over the bathtub or shower stall and the space below this zone, but not the space separated by a floor, wall, ceiling, room door, window, or fixed barrier.

Exception No. 1: Receptacles installed in accordance with 680.73 shall be permitted.

Exception No. 2: In bathrooms with less than the required zone, the receptacle(s) required by 210.52(D) shall be permitted to be installed opposite the bathtub rim or shower stall threshold on the farthest wall within the room.

Exception No. 3: Weight supporting ceiling receptacles (WSCR) shall be permitted to be installed for listed luminaires that employ a weight supporting attachment fitting (WSAF) in damp locations complying with 410.10(D).

Exception No. 4: In a dwelling unit, a single receptacle shall be permitted for an electronic toilet or personal hygiene device such as an electronic bidet seat. The receptacle shall be readily accessible and not located in the space between the toilet and the bathtub or shower.

Informational Note No. 1: See 210.8(A)(1) for GFCI requirements in a bathroom.

Informational Note No. 2: See 210.11(C) for bathroom branch circuits.

Informational Note No. 3: See 210.21(B)(1) for single receptacle on an individual branch.

#### Justification:

From NAHB and HBACA - The 2020 NEC prohibited receptacles to be installed near bathtub and shower spaces. This amendment reverts the language back to the 2017 edition of the NEC which prohibited receptacles from being located directly above a bathtub or in a shower stall. Receptacles in bathrooms are required to be GFCI protected, so further restrictions on their location are not needed.

The submitter of the code change claimed the original language was unclear, but it was easily understood in most cases. The new language adds complexity, which is made clear based on the addition of multiple exceptions, and complexity leads to non-uniform enforcement.

| Corded, handheld devices, such as hairdryers, hair trimmers and shavers have cords longer than three feet, so the new requirement does not prevent them from entering a tub or shower. Additionally, the code requires a receptacle within three feet of a sink with no minimum. No substantiation was 33 presented when this change was adopted to suggest that a receptacle within three feet of a bathtub or shower poses a greater risk than that at a sink. Since receptacles in bathrooms are required to be GFCI protected these locations do not pose different levels of risk. Both should be acceptable. |
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| Finally, receptacles in proximity to bathtub and shower spaces is addressed for manufactured and mobile homes in the code as well, but distance restrictions are not included. The requirements for site-built homes should not be more restrictive than for manufactured and mobile homes.  |
| Similar amendments have been adopted in Maine, Oregon, Utah, and other Arizona jurisdictions.  |
| Cost Impact: No cost impact.   |
| Staff Committee Rationale for Recommendation: The NEC Committee recommends that this proposed amendment be denied. There is a greater shock hazard risk when a person is wet due to the reduction of the skin's resistance. Although not the same distance; the same rationale for the distance restrictions for receptacles with respect to a pool is now being applied in the proximity of bathtub and shower spaces.  |
| Approved in previous 2018 Code Adoption process: ☐ YES ☒ NO  |
| ACTION TAKEN:  |
| 2024 Code Committee Date: 1/7/2025   |
| Approved as submitted Modified and approved Denied No action taken   |
| Development Advisory Board (DAB) Subcommittee  Date: 3/20/2025   |
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| ☐ Approved as submitted ☐ Modified and approved ☐ Denied ☐ No action taken   |
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