7/29/25:

DEPARTMENT OF LABOR AND INDUSTRY

CODE CHANGE PROPOSAL FORM

(Must be submitted electronically)

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Date: 06/23/25

Model Code: 2024 IRC

Code or Rule Section: R319.5, R319.7.1

Topic of proposal: Replacement EERO

Code or rule section to be changed: IRC R319.5 & R319.7.1

Intended for Technical Advisory Group ("TAG"):

General Information	**Yes**	**No**
A. Is the proposed change unique to the State of Minnesota?	☒	☐
B. Is the proposed change required due to climatic conditions of Minnesota?	☐	☒
C. Will the proposed change encourage more uniform enforcement?	☒	☐
D. Will the proposed change remedy a problem?	☒	☐
E. Does the proposal delete a current Minnesota Rule, chapter amendment?	☐	☒
F. Would this proposed change be appropriate through the ICC code development process?	☐	☒

Proposed Language

1. The proposed code change is meant to:

   ☒ change language contained the model code book? If so, list section(s).
   R319.5, R319.7.1

   ☐ change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

   ☐ delete language contained in the model code book? If so, list section(s).

   ☐ delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

   ☒ add new language that is not found in the model code book or in Minnesota Rule.
   R319.5, R319.7.1
2. Is this proposed code change required by Minnesota Statute? If so, please provide the citation.
   No

3. Provide *specific* language you would like to see changed. Indicate proposed new words with underlining and ~~strikethrough~~ words proposed for deletion. Include the entire code (sub) section or rule subpart that contains your proposed changes.

The following language revises the language that was approved by the TAG on April 8, 2025:
R319.5 Replacement windows for emergency escape and rescue openings.
Replacement for *emergency escape and rescue openings* installed in *buildings* meeting the scope of this code shall be exempt from Sections R319.2 and R319.4.4, provided that the replacement window meets the following conditions:

1. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window. ~~Replacement windows of the same operating style shall be~~ ~~The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening.~~ ~~The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.~~
2. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. ~~Replacement windows of a different operating style shall comply with a minimum clear vertical dimension of 24 inches, a minimum clear horizontal dimension of 20 inches, a minimum net clear area of 4.0 square feet, and a maximum sill height of 44 inches above the finished floor.~~
3. The replacement window is not part of a *change of occupancy* or a change of use of a space, to a use that requires emergency escape and rescue openings.

Replacement windows installed in a building involved in a *change of occupancy* shall comply with all provisions Section 319.7.1.

R319.7.1 Existing emergency escape and rescue openings.
Where a *change of occupancy* would require an *emergency escape and rescue opening* in accordance with Section R319.1, operable windows serving as the *emergency escape and rescue opening* shall comply with the following:

1. An existing operable window shall provide a minimum net clear opening of 4 square feet (0.28 m2) with a minimum net clear opening height of 22 inches (559 mm) and a minimum net clear opening width of 20 inches (508 mm).
2. A replacement window where such window complies with ~~both~~ all of the following:
   2.1 The replacement window meets the size requirement in Item 1.
   2.2 The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
   2.3 The replacement window is the manufacturer's largest standard-size window that will fit within the existing frame or existing rough opening. ~~The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.~~

4. Will this proposed code change impact other sections of a model code book or an amendment in Minnesota Rule? If so, please list the affected sections or rule parts.
Yes, if approved, we would support the same change in the 2024 IEBC and for the IEBC TAG group to consider which includes the TAG approved additional language following "change of occupancy" and would correct a wrong reference in Sections 702.5 and make the same changes in Section 1011.5.6.

702.5: **Replacement of windows for emergency escape and rescue openings.**
Where windows are required to provide *emergency escape and rescue openings* in Group R-2 and R-3 occupancies and one- and two-family dwelling and townhouses regulated by the International Residential code, replacement windows shall be exempt from the requirements of Section 1031.3 of the International Building Code and Section R3190.2 of the International Residential Code, provided that the replacement window meet the following conditions:

1. ~~1.~~ The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
2. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. ~~The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.~~
3. ~~2.~~ The replacement window is not part of a *change of occupancy* or a change of use of a space, to a use that requires emergency escape and rescue openings.

1011.5.6: Existing emergency escape and rescue openings.
Where a *change of occupancy* would require an *emergency escape and rescue opening* in accordance with Section 1031 of the *International Building Code*, operable windows serving as the *emergency escape and rescue opening* shall comply with the following:
1. An existing operable window shall provide a minimum net clear opening of 4 square feet (0.38 m^2) with a minimum net clear opening height of 22 inches (559 mm) and a minimum net clear opening width of 20 inches (508 mm).
2. A replacement window where such window complies with ~~both~~ all of the following:
   2.1 The replacement window meets the size requirement in Item 1.
   2.2 The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
   2.3 The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. ~~The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.~~

Need and Reason

1. Why is the proposed code change needed? Please provide a general explanation as well as a specific explanation for any changes to numerical values (heights, area, etc.)
   The Minnesota DLI Code Change Proposal (CCP) approved during the Minnesota Residential Building Code TAG meeting on April 8, 2025 in Handout 3 is problematic for the following reasons, including:
   1. The language in the CCP approved by the Residential Building Code TAG uses improper Code language. The charging paragraph R319.5 Replacement windows for emergency escape and rescue openings - specifically exempts replacement windows from R319.2. However, the approved CCP brings the requirements of R319.2 right back into their revised Section 2 by requiring the very items replacement windows are exempt from.
      - Section R319.2 Emergency Escape and Rescue Openings includes Section R319.2.1 through R319.2.4
        - R319.2.1 Minimum size (5.7 sq. ft. or grade floor of 5 sq. ft.)
        - R319.2.2 Minimum dimensions (24 inches high, 20 inches wide)
        - R319.2.4 Maximum height from floor (not greater than 44 inches from the floor)

The approved CCP, specifically R319.5, Section 2 is going to create problems in the window replacement market because it contradicts the charging paragraph in R319.5 and there will be problems interpreting the approved CCP language.

2. The approved CCP also ignores similar allowances that exist in the 2024 IRC for replacement windows in a *change of occupancy* in Section R319.7.1 Existing emergency escape and rescue openings, that will still allow the same requirements for the replacement window to have an equal or greater window opening area to which the approved CCP did not address. Additionally, the 2024 IEBC Section 702.5 Replacement window for emergency escape and rescue openings and in 1011.5.6 Existing emergency escape and rescue openings, both allow the same requirements as in the 2024 IRC and which did not get addressed with a CCP.

3. The existing IRC language that was amended by the approved CCP functionally changes the existing IRC Code language to specifically hinder replacing existing EERO windows with windows that allow for an equal or greater window opening area (aka net clear opening). The approved CCP re-establishes installation requirements (minimum size, minimum dimensions, maximum height) on those replacement products that R319.5 states they are exempt from. Why do these additional requirements need to be applied for a replacement window that provides an equal or greater window opening area? For example, going from a single/double hung or a horizontal gliding/sliding window to a casement would allow for an equal or greater window opening area. See examples in the included supplement with this CCP.

4. Taking the requirements in IRC Section 319.7.1 Existing emergency escape and rescue opening (for a change of occupancy) which allows for a minimum of 4.0 square feet and bringing them into IRC Section 319.5 will now allow all users of this code to specifically make their windows smaller and significantly smaller than their existing EERO window which may have been unintended.

5. During two meetings, topics were raised by MN DLI staff when discussing changing out an existing EERO window with awning window(s). It should be noted that we are not aware of any manufacturers that identify awning windows as EERO windows. There could be some exceptions to this (we cannot speak for them all) but we had 5 manufacturers (including Marvin and Andersen) present at the ICC Code Hearings in Orlando from April 27 – May 4 and none of those manufacturers identify awnings as EERO windows. The practice of replacing existing EERO windows with awnings or even dual awnings, could have been found in violation of existing Code requirements, rather than suggesting a CCP

6. It is fairly well known that windows with meeting/check rail are less efficient than windows such as casements. Those same casement windows will be more efficient and provide an equal or greater window opening area but the approved CCP places additional installation requirements on these products. Therefore, in order to comply with *IECC's Chapter 5, Existing Building R503.1.1.1 Fenestration alterations*, consumers who would want to change out an existing horizontal or vertical slider for a casement product will have to comply with more requirements than just replacing with the same style horizontal or vertical slider.

7. At Andersen and Marvin, we rarely receive phone calls or emails where contractors, architects or building inspectors are questioning this Code section (nationwide).

8. There is another important issue to point out here when replacing any window with a window that allows for a greater window opening area. There are times when someone may be replacing an existing single/double hung or slider window with a casement window which results in those windows being able to now serve as an new EERO window because the net clear opening improves greatly to meet the minimum requirements – 20 inches wide, 24 inches tall, or greater than 5.7 square feet (sill less than 44 inches from the floor). While this may not be intended purpose of the chosen replacement window, it supports keeping the existing requirement: "The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area that the existing window."

2. Why is the proposed code change a reasonable solution?
   This CCP provides a different order and clarification of language in this section which will continue to allow for consumers to provide replacement windows with an equal or greater window opening than the existing product types without additional conflicting requirements established in the approved CCP. This is critical to continue to allow consumers options to put in windows with an equal or greater openings and more efficient options. Existing ICC Section R319.5 is clear as it pertains to allowing products that are equal or greater window opening area than existing EERO windows. Therefore, this option places this allowance as number 1 and separates it from the portion that allows the 'manufacturers' largest standard size window'. This will establish this as the first reviewed priority when reviewing this CCP section.

   The second part of the CCP allows for the replacement window to be the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. There may be slight differences in product when going from single pane, dual pane, or triple pane products that are more efficient. Those slight changes are what the charging paragraph has allowed in the Code by stating "shall be exempt from Sections R319.2."
   - Section R319.2 Emergency Escape and Rescue Openings (minimum size, minimum dimensions, maximum height from floor and EEROs)

   The general idea here supports that most people want old windows to be replaced with more energy efficient products when the time comes. The participants of the existing replacement EERO window language didn't want anyone in the field to get into the minute details of inches here or there as long as the product had the equal or greater window opening area with the new product.

   That last part of this CCP, includes a pointer to the section that addresses the replacement window requirements involved in *change of occupancy* in IRC Section R319.7.1. which is an important pointer to the replacement windows involved in a change of occupancy.

3. What other factors should the TAG consider?
   TAG members should understand that the approved CCP would unreasonably restrict anyone from installing a product that would allow for an equal or greater window opening area which seems to go against the very arguments they used to support the approved code change.

   The approved CCP even specifically allows for smaller EEROs to be installed – only requiring 4.0 sq. feet.

   The approved CCP may be based upon information about awnings and EEROs that may not be accurate.

   There are broader changes needed across Code sections in the IRC and also the IEBC that this CCP addresses or points to.

   As Andersen Windows mentioned during discussions on a previous CCP, the existing code language was developed in MN as a collaboration between window manufacturers and State of Minnesota participants. From what we understand, the language developed was considered so successful, it was used as a key part of the reason statement for getting the same language into the IRC.

   This language has been in the IRC since 2015 and out of the hundreds of CCP's submitted for the 2027 IRC – none of those addressed this section.

Cost/Benefit Analysis

1. Will the proposed code change increase or decrease costs? Please explain and provide estimates if possible.
   This CCP will not increase the cost of construction because it closely aligns with existing Code language and more clearly outlines the requirements.

2. If there is an increased cost, will this cost be offset by a safety or other benefit? Please explain. If the benefit is quantifiable (for example energy savings), provide an estimate if possible.

3. If there is a cost increase, who will bear the costs? This can include government units, businesses, and individuals.

4. Are there any enforcement or compliance cost increases or decreases with the proposed code change? Please explain.
   There should be no increase in cost and builders and installers can continue to operate as they have in the State of Minnesota with the existing Code with additional language clarifications that may help them understand this section more clearly.

5. Will the cost of complying with the proposed code change in the first year after the rule takes effect exceed $25,000 for any one small business or small city (Minn. Stat. § 14.127)? A small business is any business that has less than 50 full-time employees. A small city is any statutory or home rule charter city that has less than ten full-time employees. Please explain.
   No

Regulatory Analysis

1. What parties or segments of industry are affected by this proposed code change?
   With this code change, I would not expect segments of industry to be affected since it more clearly outlines existing requirements and does not place additional enforcement or complex requirements for contractors/installers, or inspector of replacement EERO windows.

2. Can you think of other means or methods to achieve the purpose of the proposed code change? What might someone opposed to this code change suggest instead? Please explain what the alternatives are and why your proposed change is the preferred method or means to achieve the desired result.
   Yes – this Code change considers the concerns mentioned during the TAG meetings and presents a solution that has been allowed by the MN Code for several cycles. No other States, that we are aware of have needed to amend this section. Also, during the April 27-May 4 Group B Code hearings in Orlando – there were no proposed code changes from anyone for this section.

   The approved CCP for replacement windows is confusing and specifically allows smaller replacement windows. Also, it would have been a great opportunity for anyone proposing a CCP regarding replacement windows to reach out to Andersen and Marvin to discuss prior to submitting a CCP to see if we could gain consensus.

   Marvin and Andersen discussed this with MN DLI staff to determine the next best steps at the Code Hearings in Orlando in order to understand whether we had an opportunity to submit a competing CCP or if we had to wait for the approved CCP to go to the next level. Rather than debate the merits of the approved CCP with staff, this proposal seeks to address our concern as a manufacturer and to best understand how our people in the field who sell and/or install replacement windows will be able continue to do business. The existing IRC language doesn't get better with the

approved CCP, which is unclear and will create more questions from the field for replacement windows.

Further, Marvin met with Greg Metz to discuss concerns with the approved CCP on May 28th. MN DLI was not willing to revise the TAG approved CCP so submitting a competing CCP was a reasonable solution.

Additionally, MN DLI could have considered creating a 'white paper' that explained this issue more clearly rather than submitting the CCP. That white paper may have been helpful to inspectors, builders, installers and homeowners.

3. What are the probable costs or consequences of not adopting the code change, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals?
   Bringing in new requirements that have never been established before in the IRC from the IEBC is going to cause confusion. Regulators always try to claim that if allowed, the manufacturers
   As outlined above, if the TAG does not consider adoption of this CCP and allows the approved CCP to move forward, there will be confusion on this issue. It is going to create confusion for dealers, installers, designers, and architects who have to interpret the approved CCP that is contradictory and allows for smaller windows in existing EEROs.

   If the MN TAG approves this competing CCP, I would not expect additional costs or consequences as this CCP clearly aligns with existing code language and improves existing Code language requirements.

4. Are you aware of any federal or state regulation or requirement related to this proposed code change? If so, please list the federal or state regulation or requirement and your assessment of any differences between the proposed code change and the federal regulation or requirement.
   No

***Note: The information you provide in this code change proposal form is considered Public Data and used by the TAG to consider your proposed modification to the code. Any code change proposal form submitted to DLI may be reviewed at public TAG meetings and used by department staff and the Office of Administrative Hearings to justify the need and reasonableness of any proposed rule draft subject to administrative review and is available to the public.

****Note: Incomplete forms will be returned to the submitter with instruction to complete the form. Only completed forms will be accepted and considered by the TAG. The submitter may be asked to provide additional information in support of the proposed code change.