




OCEAN CITY FIRE MARSHAL'S OFFICE
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MEMORANDUM

Subject: Required installation of light dispersion features on Double-Paned Low-E Windows	Memo #: 2024-001
	Effective: January 26, 2024
Authority: Deputy Chief Josh Bunting, Fire Marshal Chief Building Official James Metzgar 	Building Permit Applicants Internal (FM/P&Z)

Background

The Fire Marshal's Office has identified several incidents recently where heat/fire-related property damage has occurred. During the investigations, installation of double-paned low emissivity (low-e) windows and the subsequent refractive focusing of refracted sunlight onto adjacent victim properties was identified as causing the heat/fire damage. In one instance, investigators were on-site as focused, refracted sunlight from one property was heating and damaging an adjacent building exterior, resulting in melting porch furniture, burning interior drapes, and melting building EIFS.

Research conducted jointly by FMO staff and Building Officials found recognition within the building industry that this situation is occurring, both locally through contractors and nationally. The National Association of Homebuilder's (NAHB) produced a white paper (*attached*), outlining the issues and the inherent difficulty in identifying exactly when the focused sunlight refraction may occur, as it involves a combination of the installation, pressure changes causing flexing of the windows, seasonal/daily sun proximity, as well as focal point related to adjacent properties or combustible items.

Research has identified best practice "remediation efforts" require the installation of light dispersing features, recommended by the window manufacturer. These most commonly come in the form of installation of window screens or films that diffuse the reflected light to avoid the focused nature and associated high temperatures on adjacent buildings, or selection of windows with installed capillary tubes, which allow the window pressures to equalize and reduce pressure-related flex that contributes to window flex.

State officials in both the Fire Code and Building Code review process are currently considering impacts and code adjustments to address the issue, but may be some time before resolutions are addressed. This may come in the form of a fire or building code requirement, or as an amendment to state adoption of the International Energy Conservation Code (IECC), which may require installation of low-e windows.

Directive

Given the demonstrated dangerous/hazardous conditions that are caused by focused, refracted sunlight from low-e windows, new low-e window installations (*and those existing installations causing demonstrated property damage related to refracted sunlight*) shall be required to be outfitted with a light dispersing feature recommended/approved by the window manufacturer, to be reviewed/inspected by the Chief Building Official or his designee prior to permit approval. (Authority: OCFPC 34-23 (i))

This memo shall be rescinded upon adoption of code language that properly addresses this issue.