

Electromagnetic Shielding & Low-E Glass

Recently we have been contacted about the effect if any of low-e glass on blocking radio and cell phone transmissions. There have been studies and investigations on the subject going all the way back to the mid 1950's even prior to the commercialization process of applying low-e coatings to flat glass.

You rarely hear about it but the simple fact is low-e coatings in windows can attenuate electromagnetic wavelengths. In the wavelengths that cellular and Wi-Fi operate; unless the whole building is designed with all materials to have electromagnetic attenuation, it is unlikely that low-e glass will have an adverse effect on the operation of these devices. In some instances buildings with a full curtain wall with a large quantity of low-e glass could have some effect and should be reviewed by the building designer. Laminated glass in conjunction with low-e coatings affects transmissions more than non-laminated.

There are design considerations that can overcome this issue such as antennae number and location on the building. There are consultants that can help architects ensure good reception and transmission is considered in the building design.

Following are two white papers done on the subject, one by Cardinal IG and one by PPG as it relates to this phenomenon.