SYRACUSE GLASS COMPANY

John Dwyer, President

TECH TIPS

For New York's Glazing & Design Professionals

One General Motors Drive, Syracuse, NY 13206 * 315-437-9971 * 800-962-3211 * www.syracuseglass.com

#11 - ENERGY CONSERVATION CONSTRUCTION CODE OF NYS - 2007

Since New York State adopted the IECC model code in 2003, we've seen a big increase in the use of low e glass in commercial applications. The glass manufacturers and fabricators like Syracuse Glass have invested in technology and equipment that makes glass an even more useful and important element of the building envelope.

For residences, the Code is summarized in this two page document that can be viewed or downloaded by googling "energy code compliance guide for homes in new york."

In commercial applications, there are multiple methods available to comply with the code. Here is an introduction to the simplest, but most stringent method, available for buildings with up to 50 percent of exterior wall area composed of windows and doors.

The code sets building envelope air leakage requirements in 802.2.9 for curtain wall, storefront glazing and entrance doors. We can provide the test reports for our Tubelite systems to meet the documentation requirements of this section.

The code assigns Counties to Climate Zones, and sets requirements, depending on the ratio of the area of windows and doors to the area of the building's total exterior wall area: less than 10%, 10-25%, 25-40%, or 40-50%:

- U values – measured as a "whole fenestration" of glass and framing material (not just center-of-glass) using NFRC 100
- SHGC values – measured as a "whole fenestration" of glass and framing material (not just center-of-glass) using NFRC 200. The SHGC requirements depend on the degree that the glazing is shaded by roof eaves, sun shades, etc. depending on the "projection factor" calculated in 802.2.3.

The U value and SHGC calculations can be produced using the AAMA 507 Standard for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings, or charts supplied by the framing manufacturer. The AAMA standard includes a document that can be used to convey and certify the energy performance and use of listed materials to the building owner or code official. This practice will suffice in our experience for the labeling requirement in the code for commercial projects.

The code in section 102.1.3 requires that the U value and SHGC calculations be determined "by an accredited, independent laboratory". We can provide lab reports of simulations done with Tubelite thermally broken aluminum framing products, and other framing suppliers can provide the same information for their systems.