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Fenestrations

GLASS AND GLAZING

Glass and glazing elements used in windows, doors, storefront and curtain wall systems, and skylights are prone to a wide variety of problems including etching, stress fractures and cracking, failure of the seal in insulated glass units, and delamination and deterioration of films and other coatings.

BC&E personnel have developed expertise in evaluating these types of unique problems with glass and glazing.









WINDOWS AND DOORS

Windows and doors are used on virtually every building, yet proper design, installation, and detailing of the perimeters of these elements remains challenging in many buildings. In particular, water and air leakage around the window and door perimeters, and through the units themselves, is a common problem.

During the evaluation of numerous cladding systems, BC&E's personnel have developed extensive experience in the evaluation of a wide-variety of





window and door systems and installation details. BC&E's capabilities include water spray testing of windows and doors in existing installations and in new construction, which provides valuable information related to the potential for water leakage and developing details to correct leakage problems. The consulting services offered by BC&E during the design stages of a project are aimed at facilitating proper specification and detailing of windows and doors, including their perimeter conditions, to reduce the risk of potential future problems.





STOREFRONTS AND CURTAIN WALLS

Storefront and curtain wall systems typically include aluminum framing systems and insulated glass units, often with aluminum-framed, glazed doors and sometimes with operable aluminum-framed windows. While similar in appearance, storefronts and curtain walls employ differing drainage mechanisms and structural support and attachment methods. Details related to their design, detailing, and installation vary among manufacturers, and many systems have a variety of installation methods. Common problems with these systems include water leakage, air infiltration, failed insulated glass units, and excessive condensation.

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BC&E personnel have extensive experience in evaluating a wide-range of problems with installed storefront and curtain wall systems. BC&E's capabilities include performing and observing water spray testing of these systems in existing installations and in new construction, which facilitates the development of details to correct leakage problems. The consulting services offered by BC&E during the design stages of a project are aimed at facilitating proper specification and detailing of storefront and curtain wall systems, including their perimeter conditions, to reduce the risk of potential future problems.



