

## BUILDING ENCLOSURE COMMISSIONING

Our unique qualifications are derived from our vast experience in evaluating and designing building enclosure systems and performing forensic building enclosure investigations. We utilize this experience during the Enclosure Commissioning Process to mitigate or prevent these scenarios from reoccurring on new buildings.

The success of any exterior building enclosure assembly can be attributed to the planning implemented during the initial phases of the design process and requires the combined efforts of the owner, users, design team, contractors, and Enclosure Commissioning Consultant.

Building Enclosure Commissioning helps to avoid common issues in building construction: air and water infiltration, indoor air quality issues, mold growth, and energy loss. These issues result in reduced energy efficiency, occupant discomfort, and costly contractor call-backs. There are many examples of building enclosure failures that cost millions of dollars to remedy. When a commissioning plan is established early in the process, it provides a systematic quality control process that helps avoid these failures.

Many new buildings fail to perform as well as expected. Enclosure leaks are a major concern and are one of the primary causes of problems in the construction industry. Once construction starts, many contractors are primarily focused on the schedule and budget. The Building Enclosure Commissioning Agent assists in maintaining the team's focus on the critical weather, vapor, insulation, and air barrier roles of the enclosure.

Typically, our services include:

- Review of Owner Project Requirements (OPR), Basis of Design (BOD), and Design Documents
- Assess constructability and maintenance issues: Can it be built? Will it work? What is the life expectancy?
- Analyze enclosure exposure and recommend materials and detailing that address enclosure-specific issues.
- Perform hygrothermal analysis of wall and glazing systems (WUFI and THERM).
- Plan water management within the enclosure (below-grade waterproofing, air/vapor barriers, flashings and wall, window, and roof configurations including green roofs).
- Verify compliance with current energy codes and industry standards for enclosure assemblies.
- Review contractor submittals, shop drawings and coordination plans.
- Verify installation and performance of enclosure systems.
- Review and test mock-up assembly.
- On-site quality control site visits to view roof, wall, window, waterproofing elements.
- Review and observe testing of in-place components: infrared surveys, whole building air-tightness testing (blower door), leak testing.
- Develop a building enclosure maintenance program

The complexity of building enclosure designs, the use of new materials, and the high rate of moisture/air infiltration reported to be occurring in new buildings dictates that Building Enclosure Commissioning (and/or enhanced commissioning) is an essential step in identifying and eliminating potential problems so that your building performs according to the OPR.