**SIMPLIFYING WHOLE BUILDING AIRTIGHTNESS**

by

Adam Ugliuzza & Andrea Wagner Watts

2024 IIBEC International Convention and Trade Show, Phoenix, AZ

**INTRODUCTION**

Value of air barriers – not just energy efficiency

Reasons behind increase in code updates

Air control is not limited to the exterior wall and relies on many building enclosure components and their connections to be successful.

Key Definitions

ACH

CFM

**UPDATES TO AIR BARRIER REQUIREMENTS IN IECC 2024 and 2022 ASHRAE 90.1**

Updates to design phase requirements

Continuous air control delineation is a requirement of the design professional

Updates to material and assembly requirements

Whole building airtightness testing evaluates the entire building enclosure.

Overview of buildings which are excluded from testing requirements.

**WHOLE BUILDING AIRTIGHTNESS TESTING**

ASTM Test Methods E779 and E3178

History and evolution of the industry test methods

Overview of testing preparations and procedure

Importance of hiring a certified technician

**COMMON PROBLEMATIC DETAILS THAT IMPACT BUILDING AIRTIGHNESS**

Roof to Wall and Rising Wall Conditions

Canopies

Podiums/Parking Levels

Mechanical Areas/Interfaces

Loading Docks/Work Bays

**CONSTRUCTION DOCUMENT REQUIREMENTS**

Air Barrier Boundary Sheets

List of sheets recommended for construction drawing set

Identifies continuous air barrier boundary and the specific material for each enclosure assembly responsible for air control

Items for Specification

Qualifications

Certified technician for airtightness testing

Equipment Requirements

Testing Requirements

**CONCLUSION**

Meeting new air barrier code requirements are achievable, but requires attention to detail by all parties involved in the construction process.