

Duct and Envelope Tightness Verifier Agenda

DAY 1

8:45 – Registration / coffee

9:00 – Math wake-up problem

9:15 – Introductions and Energy Code Overview

Building Science overview of airflow

Defining the Building Envelope

Mandatory Envelope Requirement – Air Sealing

- Test Results Form – Example problem of filling in form
- Air Sealing – Details
- Envelope Visual Inspection Checklist
- Blower Door Test Criteria
- Test Results Form – Envelope Items

10:15 – How to test with Blower Door

Understanding Blower Door testing

Test Preparation / Set up

Equipment & Components

Hands on with Blower Door equipment

12:00 – Working Lunch

Measuring Pressure with a Digital Gauge

Can't Reach Fifty?

Calculating Volume and ACH50

Filling in answers on Test Form

3:30 – Do More with your Blower Door

- Pressure Pan
- Zone Pressure testing Criteria
- Test Results Form – Envelope Items

5:00 – Adjourn Day 1 HW

- Watch both Southface videos on YouTube (Blower Door, Duct Testing)
- Read factsheet in workbook
- Watch Bruce Manclark's duct video [YouTube "Duct Testing" – 12 minutes],
- Work through "more math" module – ClassMarker link:

<http://www.classmarker.com/online-test/start/?quiz=j6y501a736840f7d>

DAY 2

8:45 – Arrival / coffee

9:00 – Math wake-up problem and review class questions

9:15 – Mandatory Mechanical System Provisions

- HVAC Controls
- Mechanical Equipment
- Duct Provisions (Insulation, Sealing)
- Duct Tightness Test Criteria

10:15 – How to Test for Duct Tightness

Duct Pressurization Blower Equipment & Components

Hands on with Duct Testing Equipment

“Total Duct Leakage” - Test Preparation / Set up

“Duct Leakage to Outside” - Test Preparation / Set up

Calculating % Duct Leakage

Blower Door Subtraction and Flow Hood

Use Your Duct Blower to do More

11:00 – Depart for Field – dress rehearsal for field test

12:00 – Working Lunch

1:00 – Begin Field Test

- Breakout groups
- Determine take-offs for fictional house (A, B, or C)
- Set up Blower Door Equipment and Prepare for Test
- Obtain Envelope Leakage Measurement with Blower Door
- Determine ACH50
- Set up Duct Testing Equipment and Prepare for Test
- Obtain “Total Duct Leakage” Measurements with Test Rig
- Obtain “Duct Leakage to Outside” Measurement with Test Rig
- Determine % Duct Leakage (Total and Leakage to Outside)
- Complete Energy Code Test Results form with appropriate Information

2:30 – Begin Written test

- As individuals complete the field exam, they can begin written test
- Written test is open book, 25 questions (76% needed to pass), 1 hour
- Test covers concepts and actual practice of answering problems and filling in Test Results form with problem answers.

5:00 – Adjourn