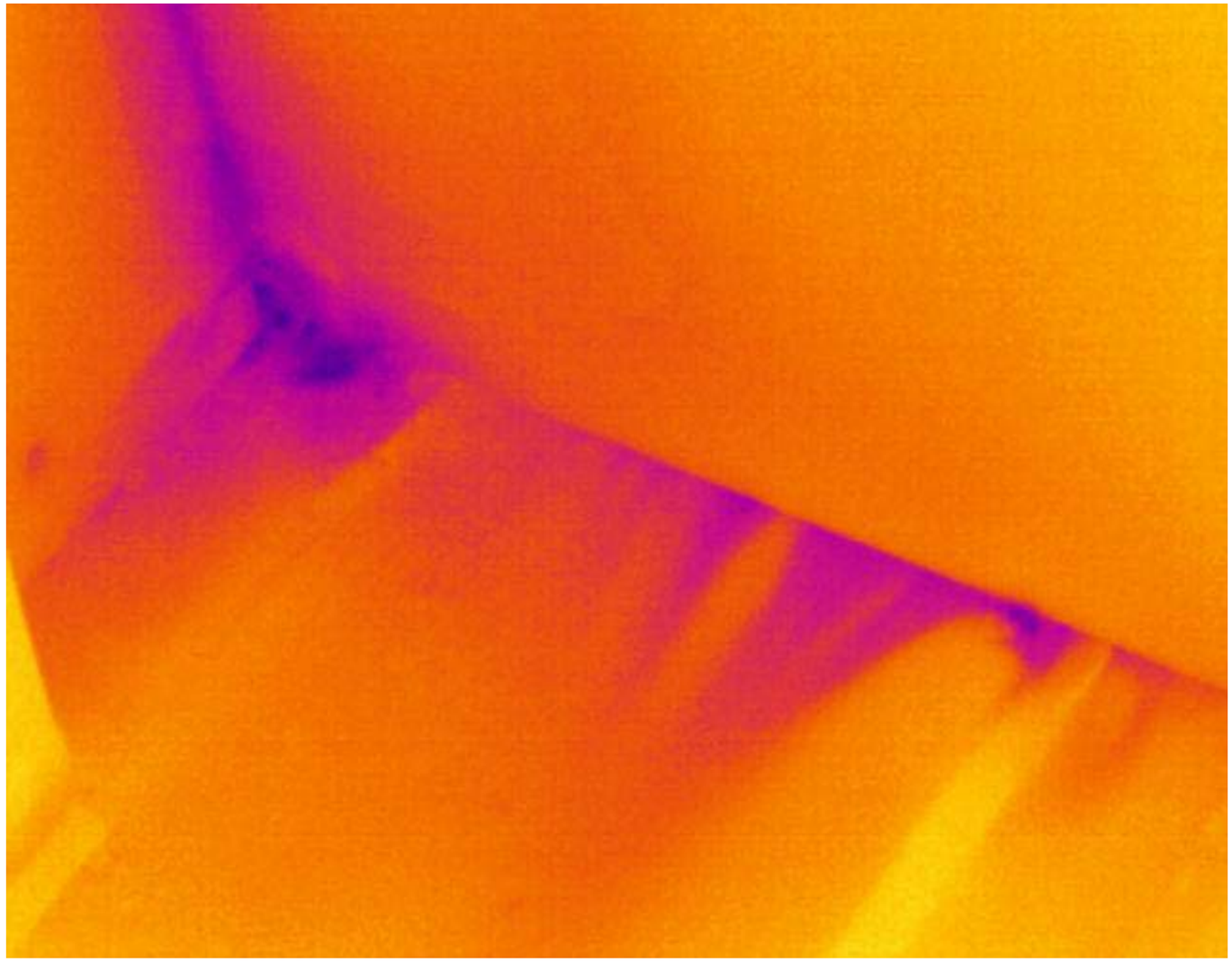
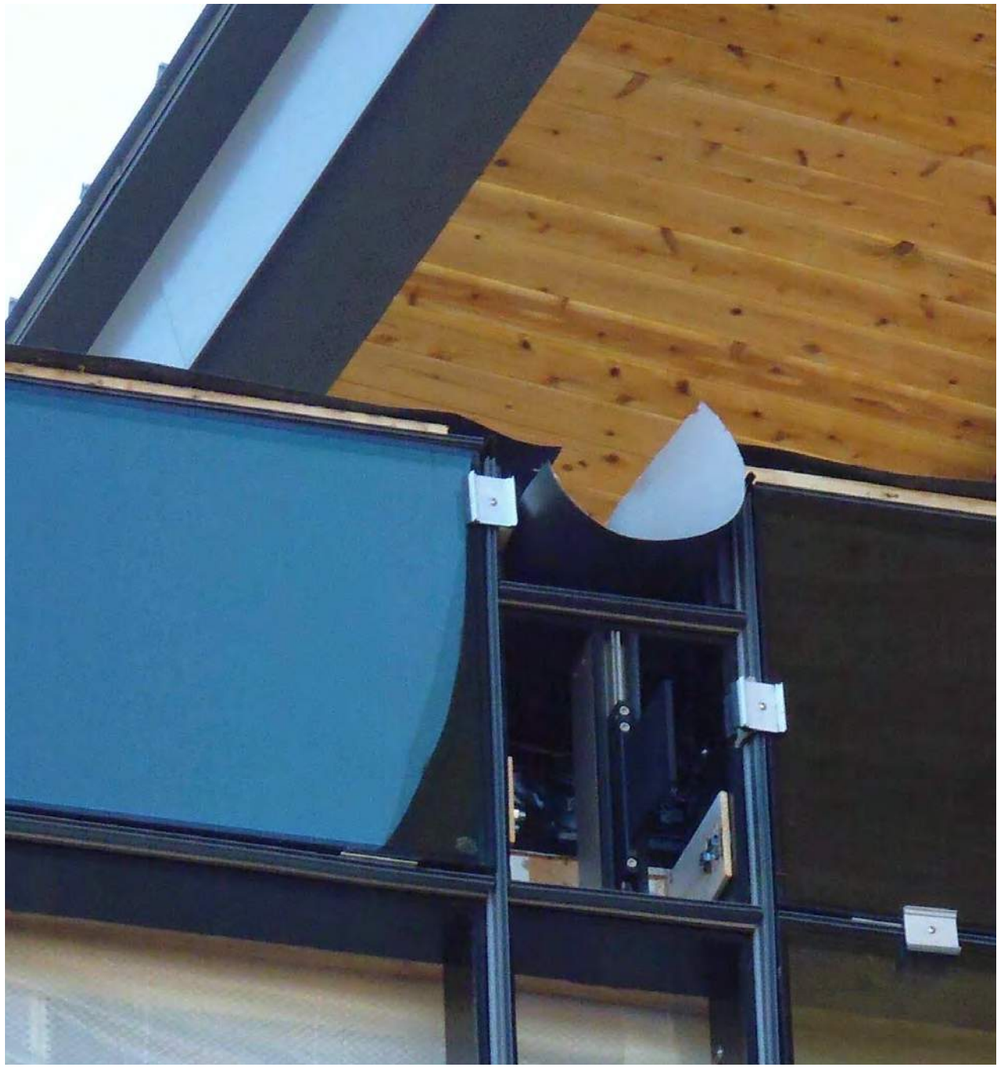
QUALITY ASSURANCE TESTING

January 1, 2016





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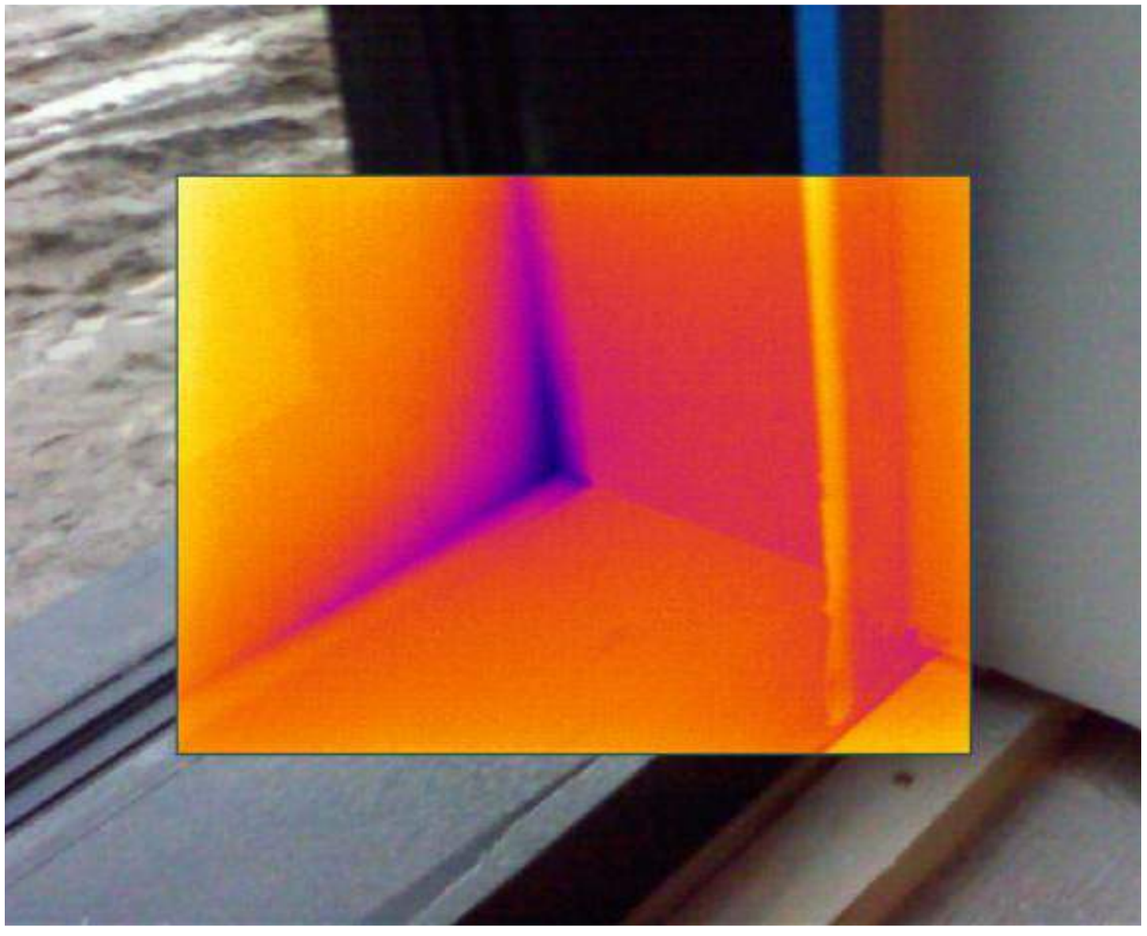
south mountain COMPANY

Bruner/Cott
architects and planners

FIRST WHOLE-BUILDING TEST

- 3,070 CFM75, 50% above the target

FIRST WHOLE-BUILDING TEST



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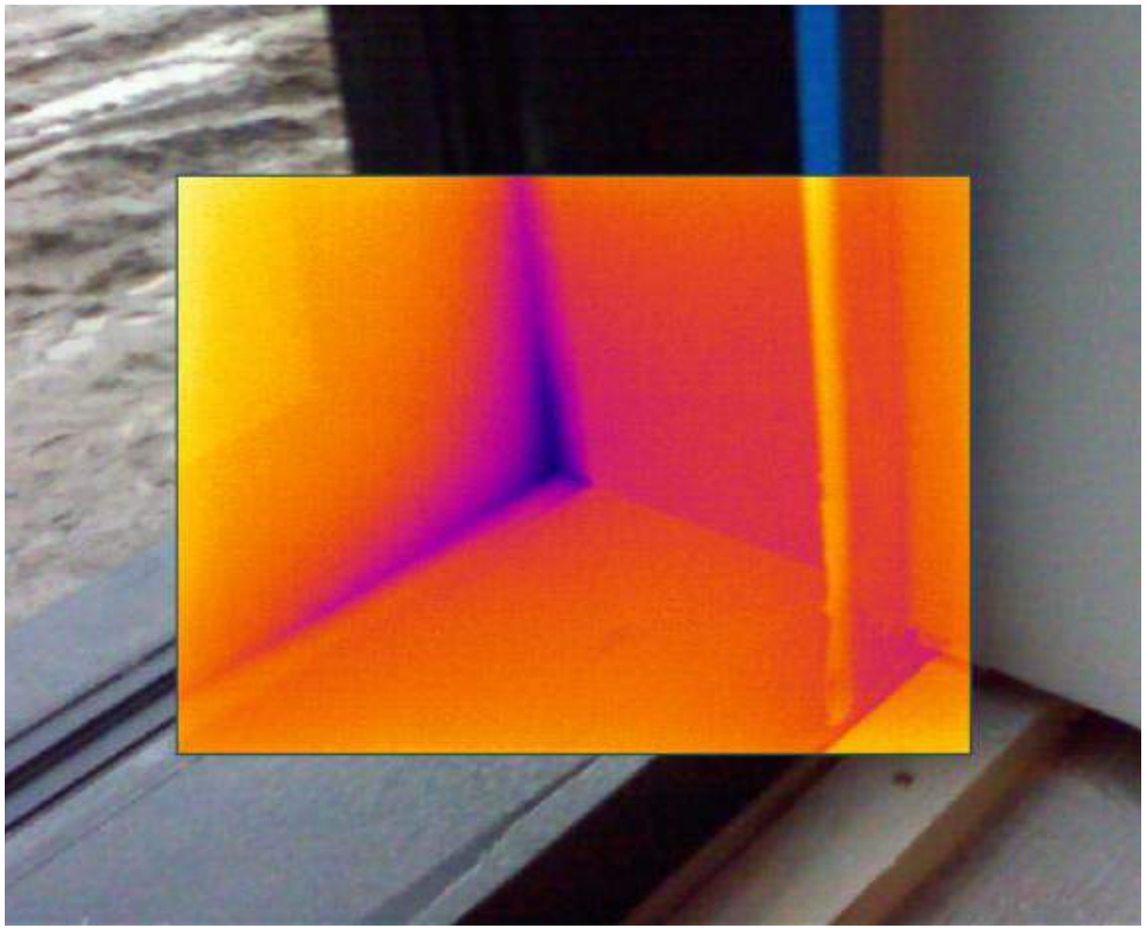

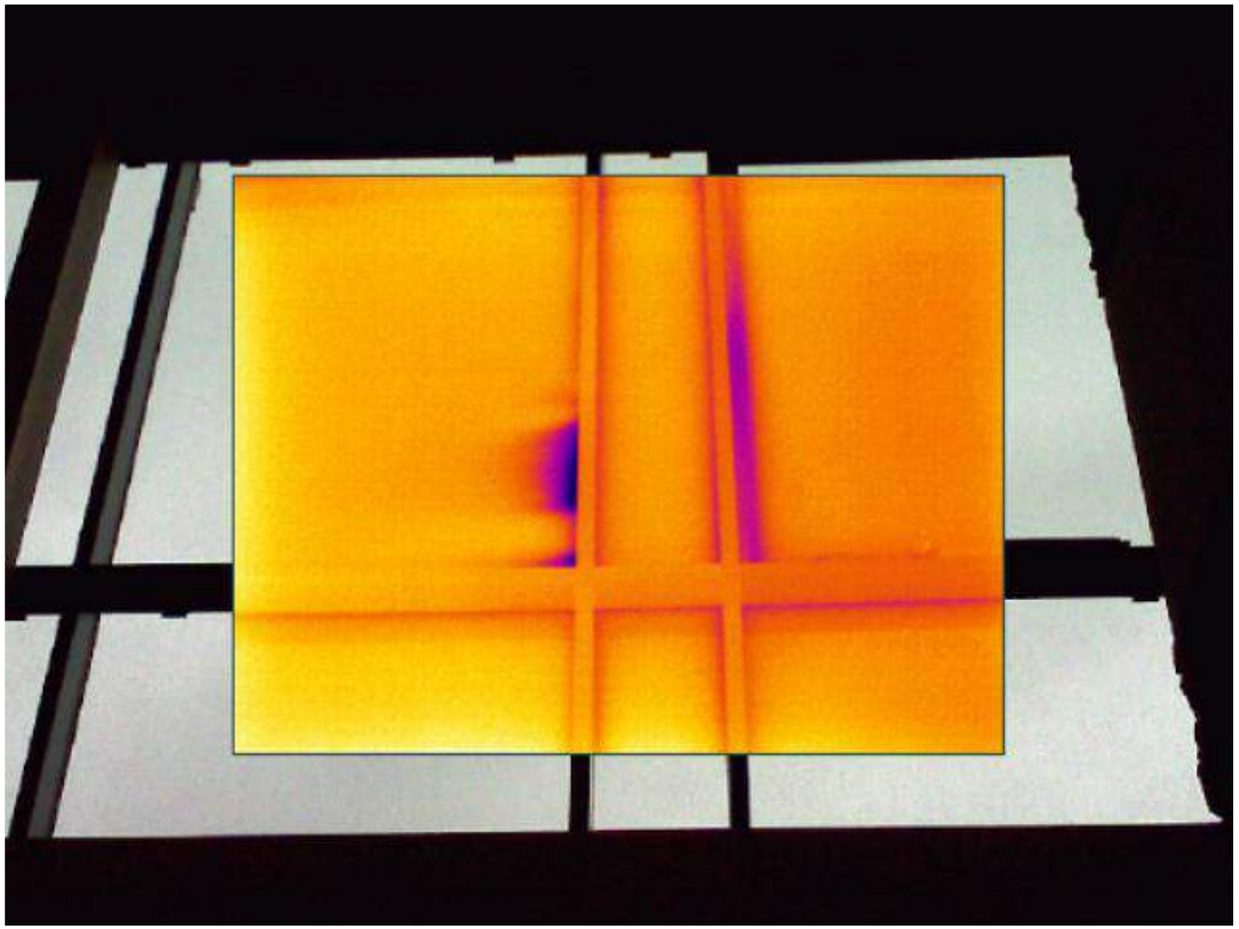

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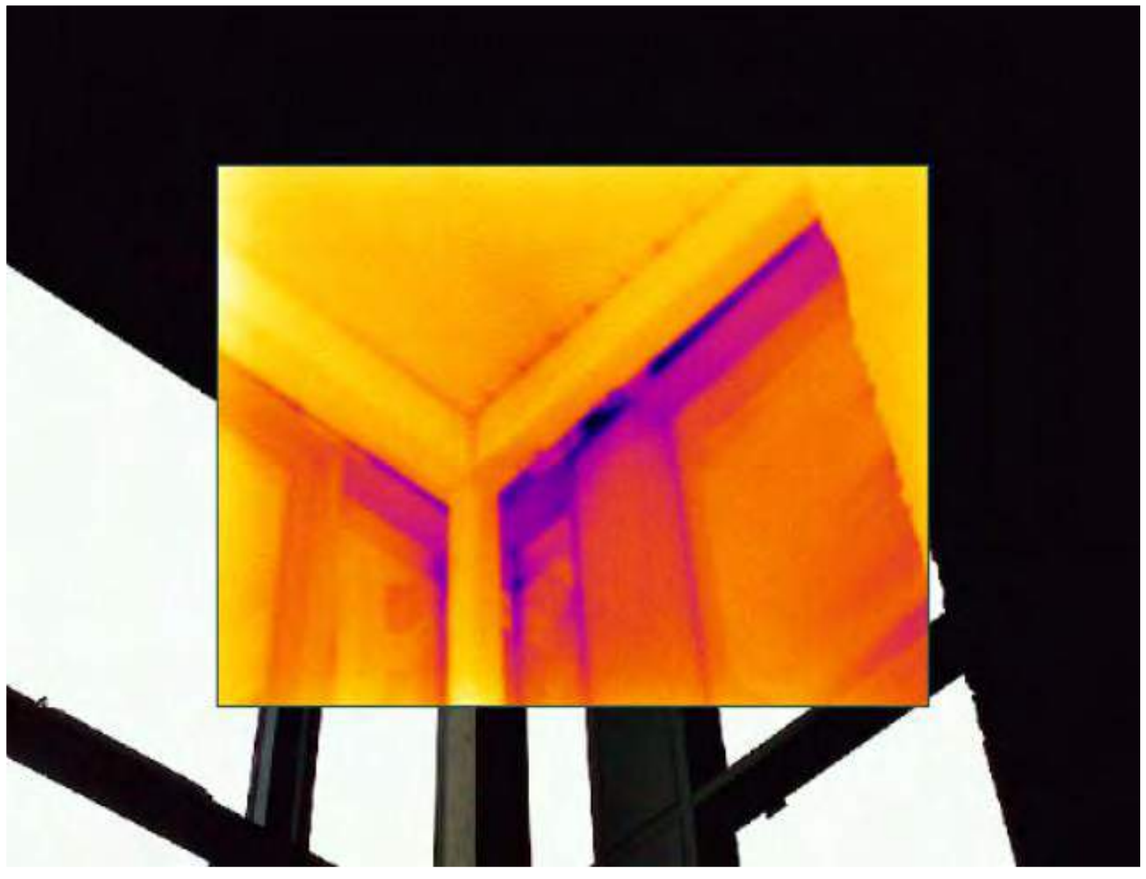

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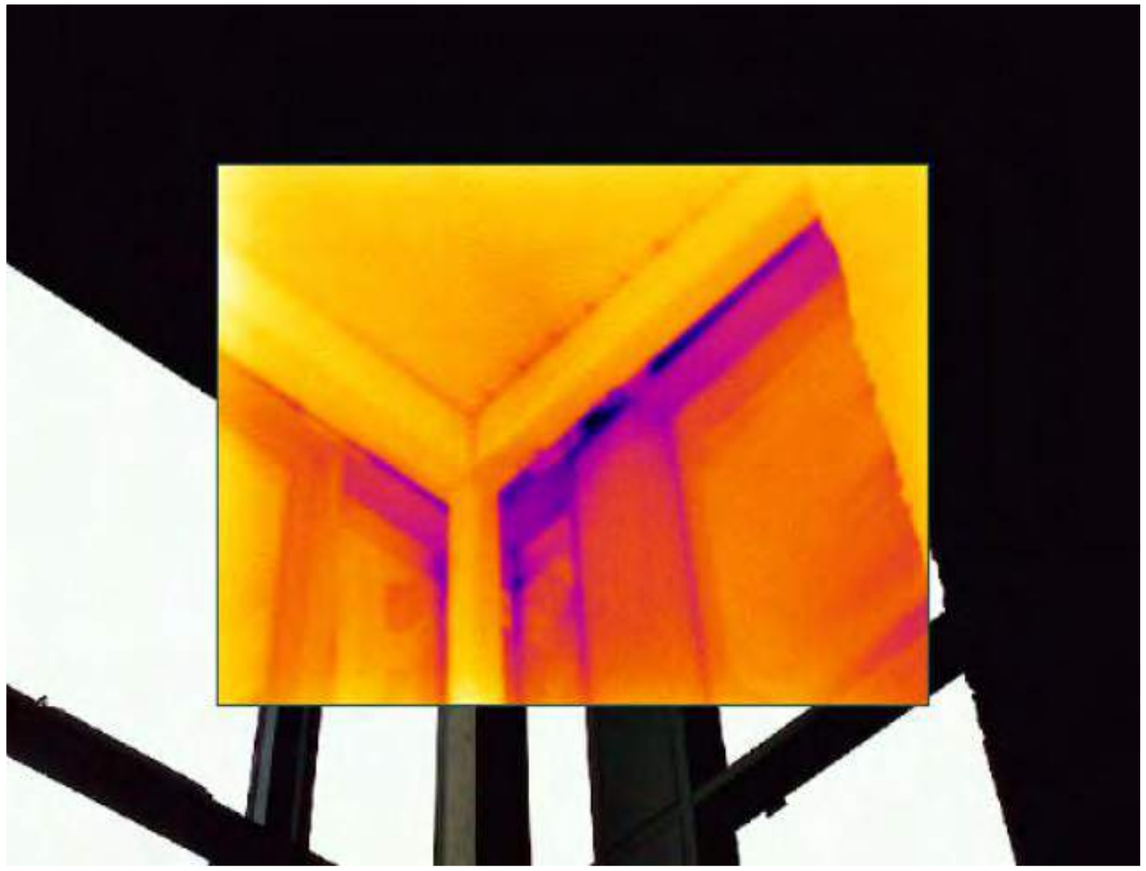

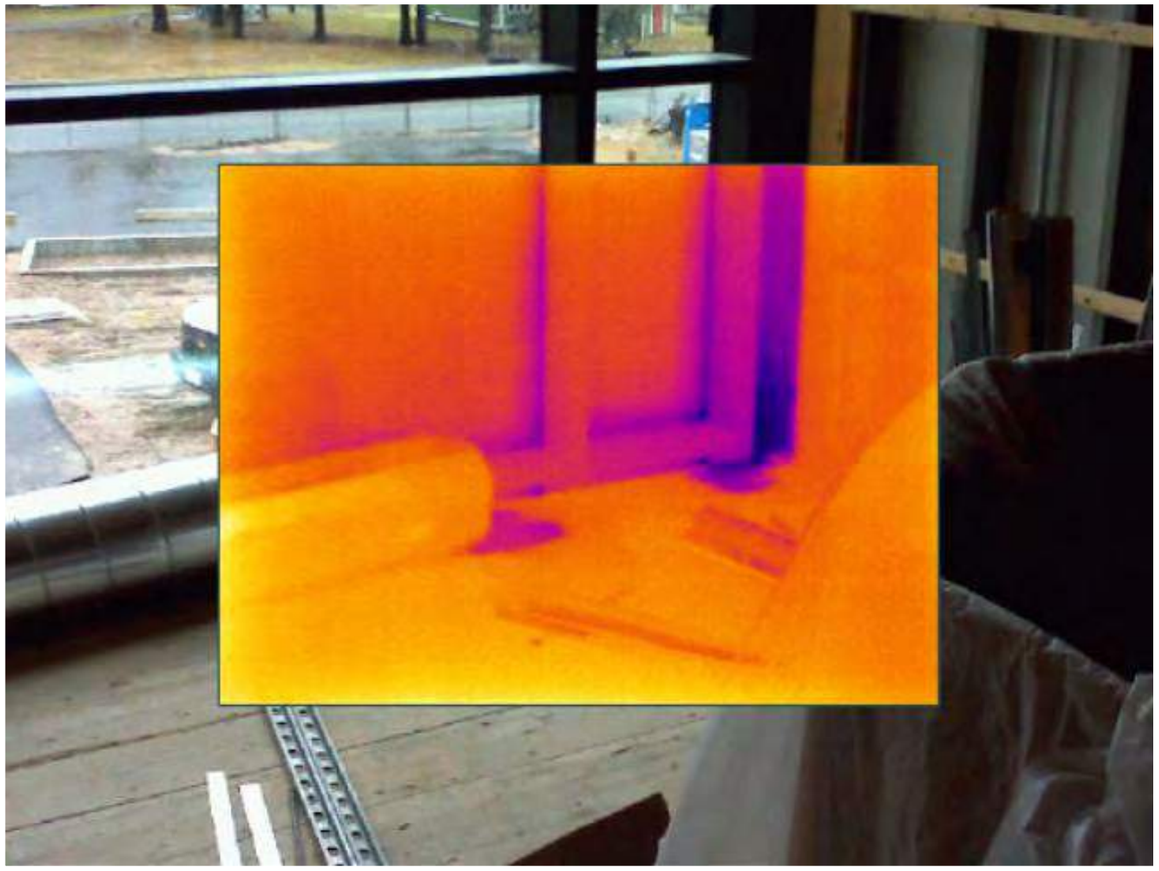

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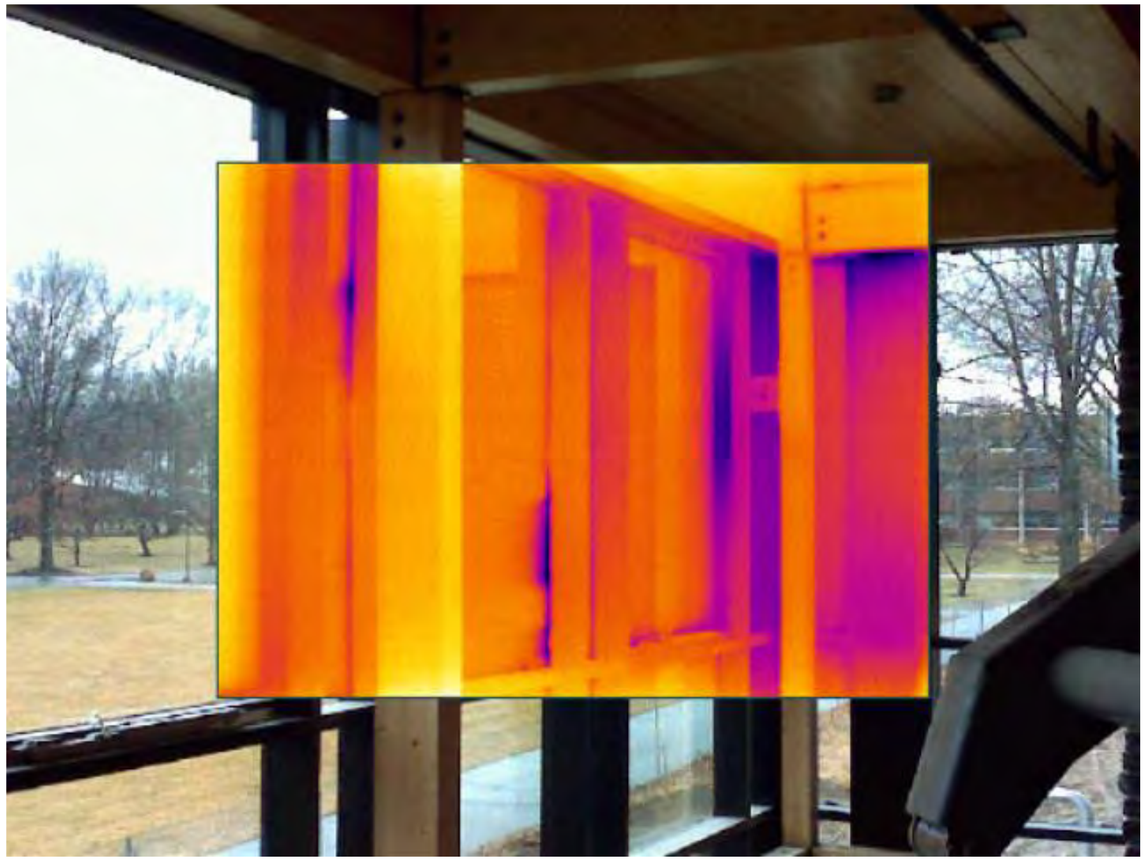

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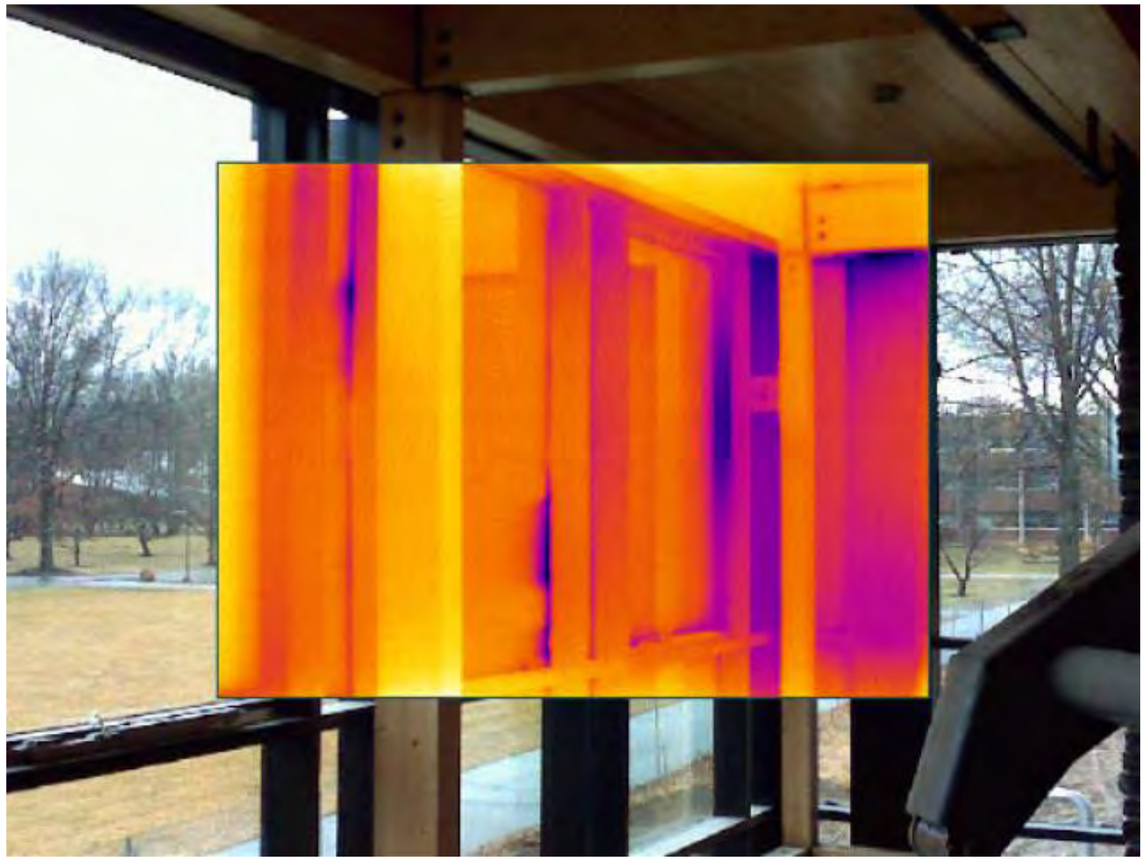

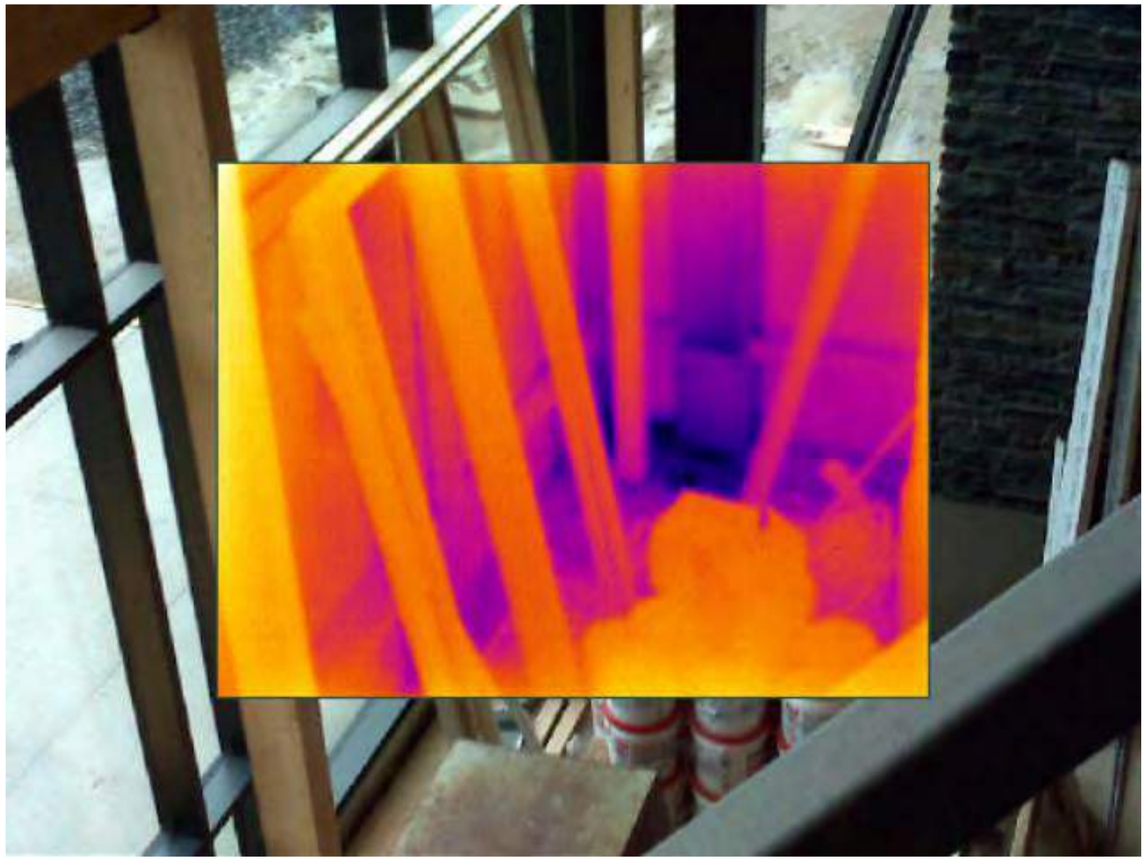

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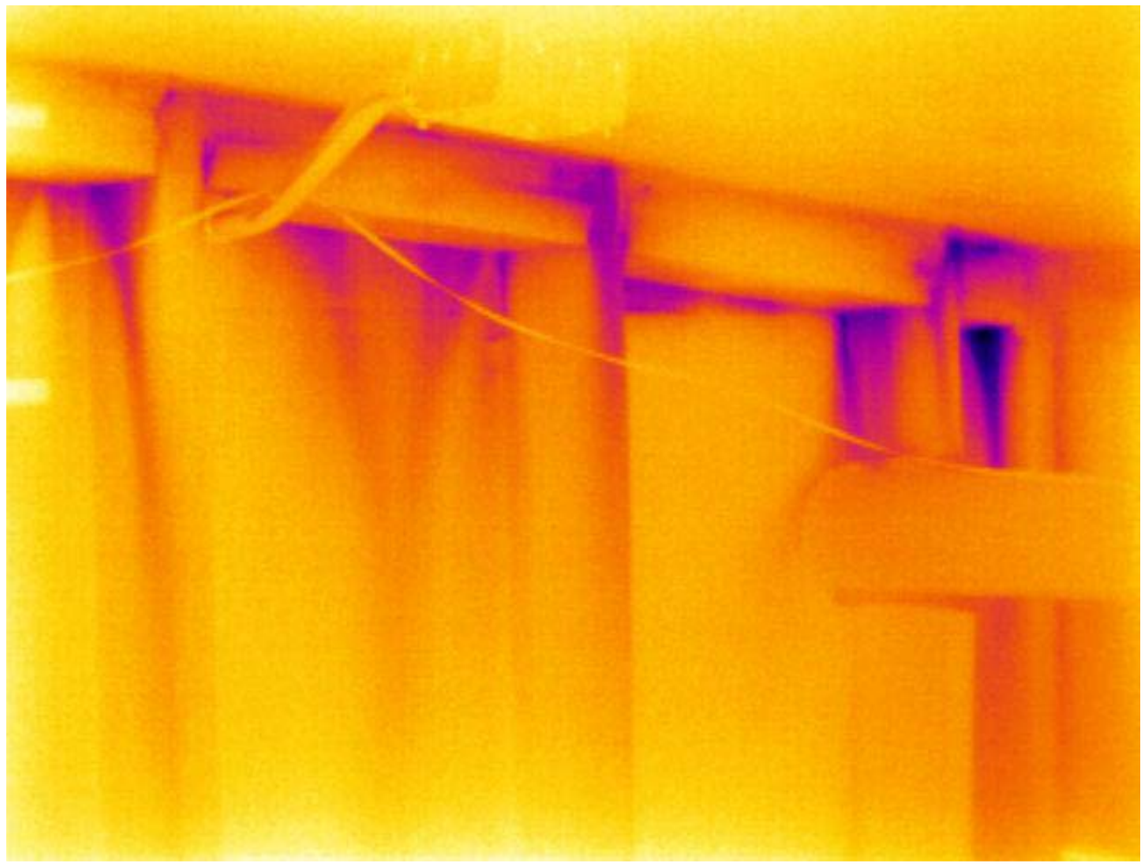

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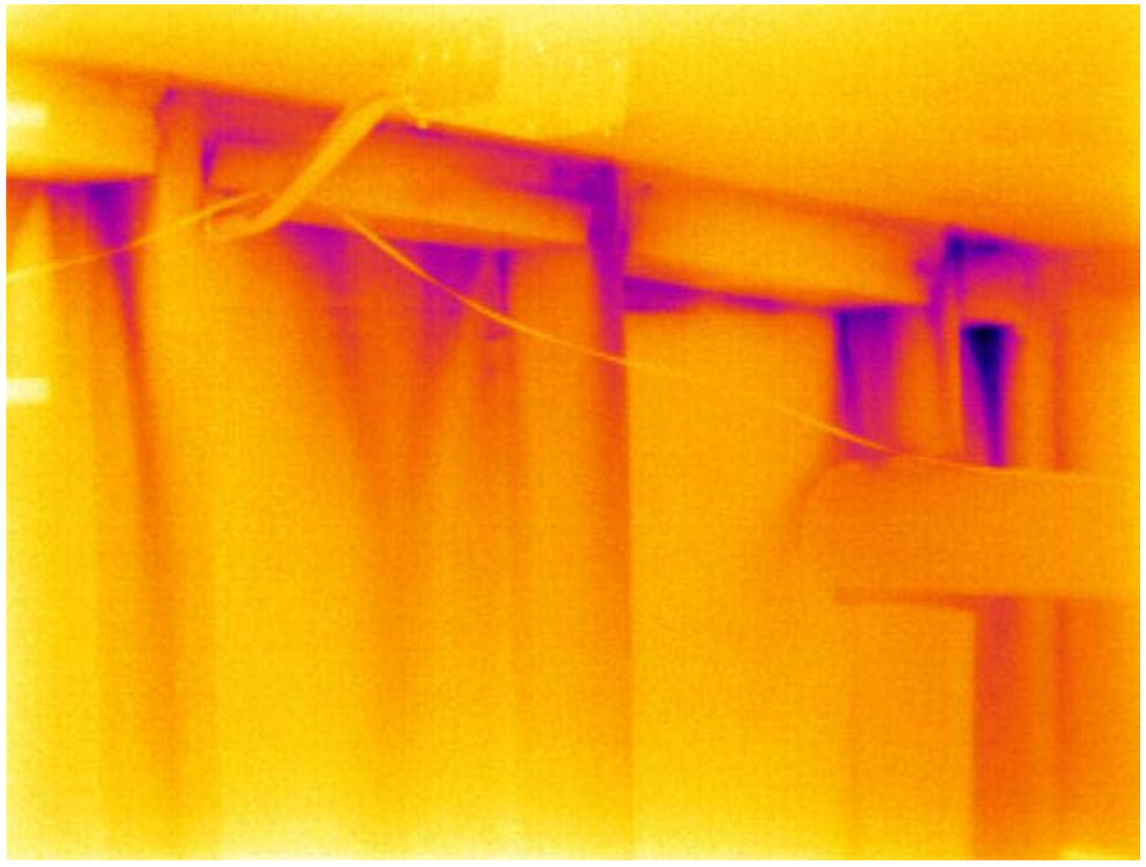

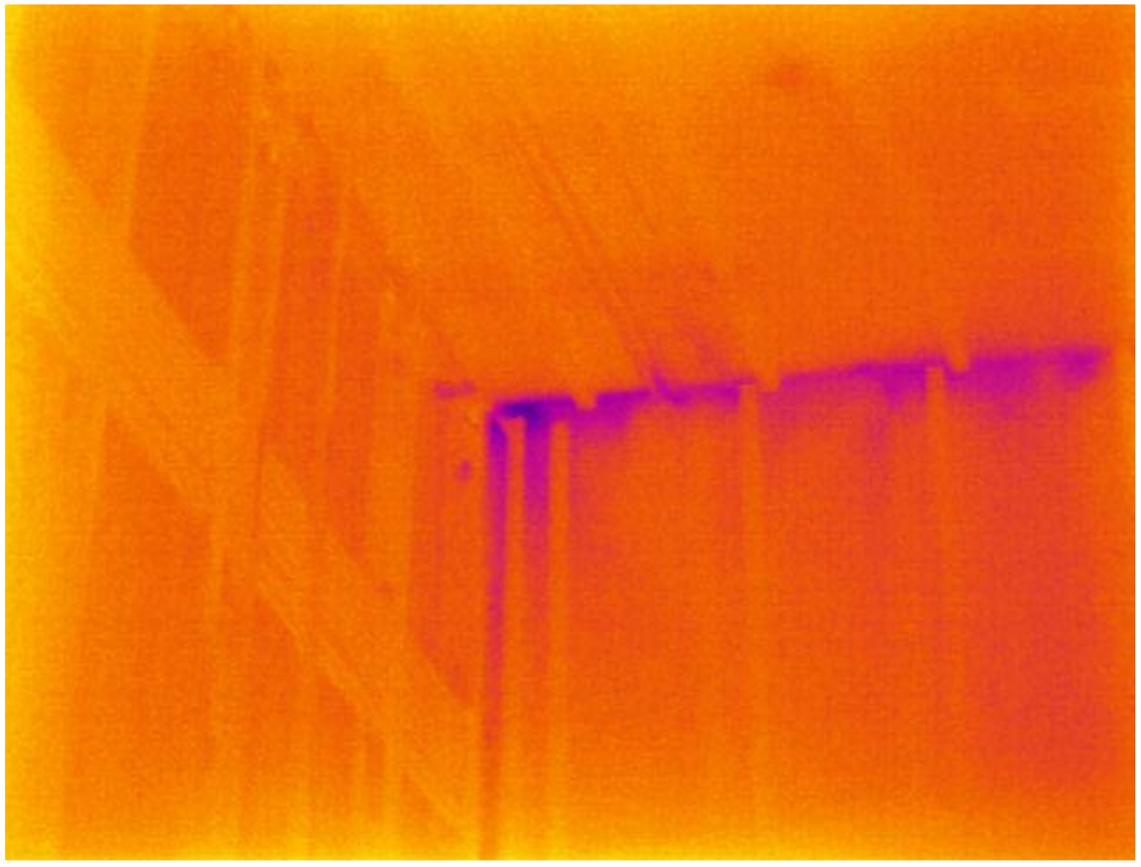

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FIRST WHOLE-BUILDING TEST

The leakage areas needing attention can be grouped as follows:

- Curtainwall
- Windows
- Curtainwall/enclosure junctions all side including low roofs
- Bump-out
- Ceiling, especially at firewalls
- Mechanical attics
- Miscellaneous enclosure defects

My recommendation is that for each area a set of the pertinent details be assembled and are used to generate a specific work plan to address each area. As noted, I believe that the curtainwall and bump-out diagnostics should include building pressurization and theatrical fog to clearly understand the leakage paths.

FINAL WHOLE-BUILDING TEST

- Army Corps protocol, pressurization and depressurization
- 1,867 CFM75, 7% below the target – thank you John Averill

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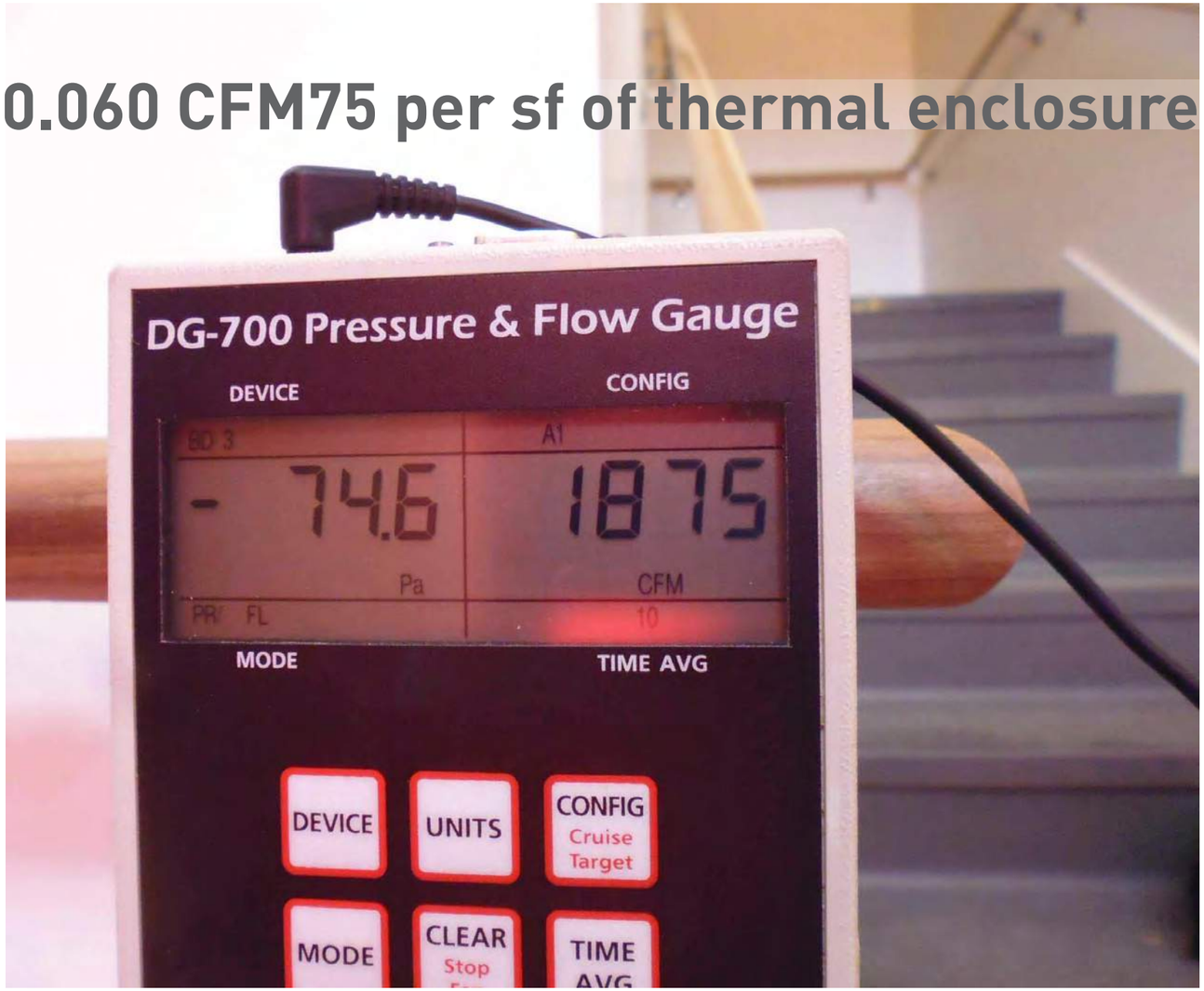

FINAL WHOLE-BUILDING TEST

The thermal enclosure was actually better than this – the vents for the ERVs and elevator vents are all behind wood louvers, so blocking them was not possible and we relied on the 18 motor dampers to seal these openings to outdoors

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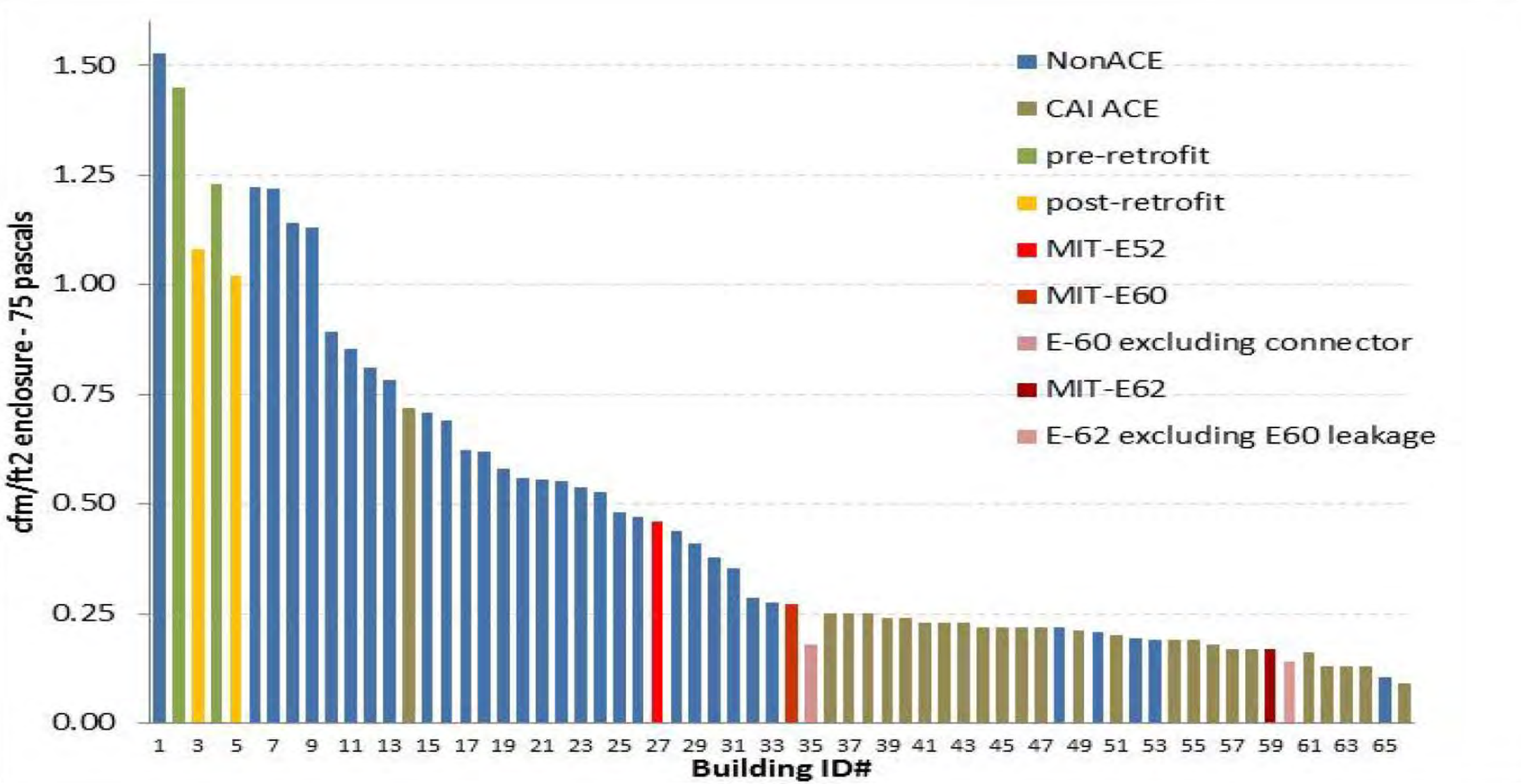
Equivalent values at 50 Pascals are:

- 1,413 CFM50
- 0.34 ACH50
- 0.046 CFM50 per sf of thermal enclosure

FINAL WHOLE-BUILDING TEST



MEASUREMENT + MANAGEMENT

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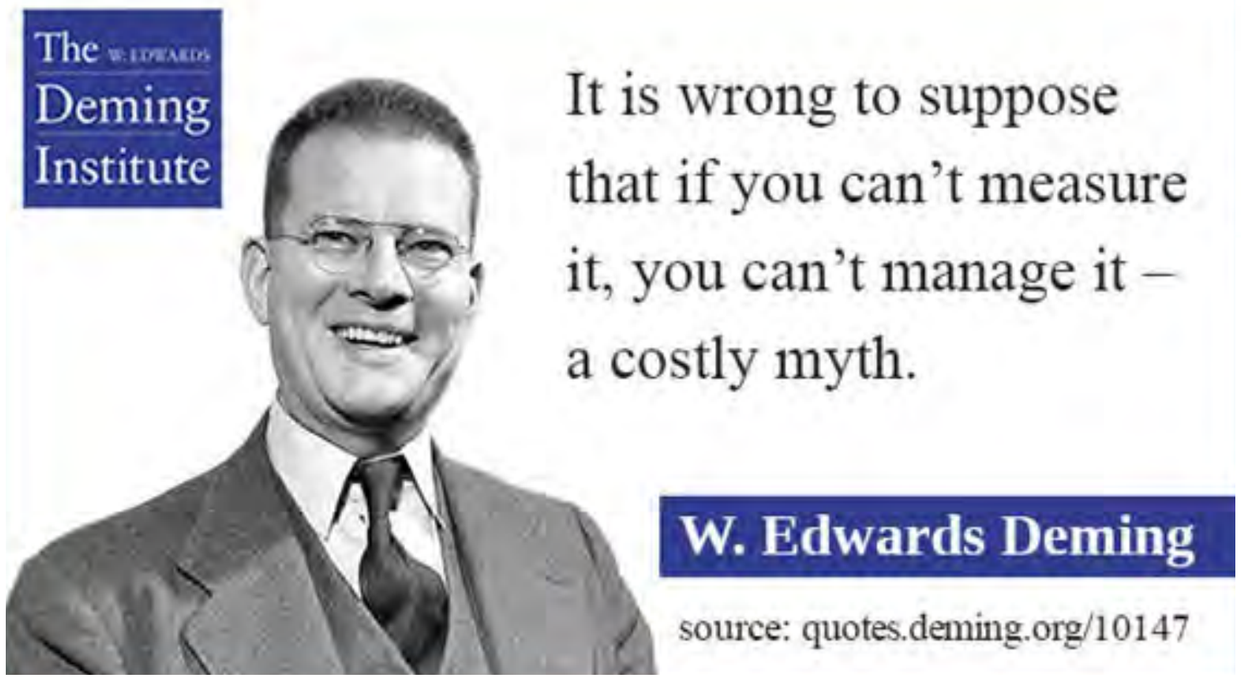

LEED CREDIT EA3.1, ENERGY METERING

Intent

- To provide information to support the ongoing accountability and optimization of building energy performance and identify opportunities for additional energy-saving investments.
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Resources

- *There are currently no associated resources.*

KERN CENTER METERING

(9) Water Meters

- (3) Incoming: Municipal and Cisterns
- (4) Use: Finished (total), Cold, Hot, Irrigation
- (2) Waste: Indoor and Outdoor Planters

(25) Electricity Meters

- (1) Main
- (13) Subpanels
  - (1) Solar PV
  - (2) Mechanical
    * (11) Mechanical Submeters: fans, pumps, water heaters, indoor heat pumps, outdoor heat pumps
  - (5) Lighting
  - (5) Plug Loads

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