



CASE STUDY

Compartmentalization

PROJECT OVERVIEW

PROJECT

153rd St Apartments

BUILDER

Synapse Development Group

ARCHITECT

Chris Benedict, R.A.

LOCATION

Upper West Side, Manhattan

RESULTS

Post-manual sealing, AeroBarrier reduced unit leakage by an additional 47%, providing overall compartmentalization levels well within calculated passive house parameters.

AeroBarrier Allows Engineers to Easily Attain Desired Tightness for Energy Efficiency, Comfort, and Livability

For New York-based architect Chris Benedict, compartmentalization is the holy grail of apartment building design. As a recognized pioneer in energy-efficient building, she understands that effectively sealing the envelope that exists between apartments is not only critical for maximum energy efficiency, but it's also key to ensuring high indoor air quality and limiting the migration of bugs, smoke, noise and other common tenant discomforts that can travel from one unit to another.

For this reason, Benedict was not happy to learn that her latest project, a newly constructed 6-story apartment building on Manhattan's upper west did not meet the passive house-levels of compartmental tightness targeted by her design. While the manual caulking applied by contractors got them close, it did not meet the industry's highest standard. Now with plumbing, electrical and sheet rock installation finished, the building was nearing completion and further manual sealing was deemed impractical.

Fortunately, Benedict had heard colleagues talk about an innovative new envelope sealing technology developed at the University of California, Davis that could be applied after construction was completed. AeroBarrier was not only highly effective, she was told, but also the single-step computerized process could be dialed in to reach specific desired results. After AeroBarrier proved successful at sealing a test unit, contractors were given the thumbs up to seal the remaining apartments within the building.

It took the AeroBarrier team just 8 days to compartmentally seal all 34 units to well below levels of tightness required for passive house certification. Blower door tests conducted after the application of the sealing technology confirmed the results – AeroBarrier was a project-saving success.

“ It was blowing people's minds – mostly because monitoring compartmentalization in a multi-family building under construction is typically a very difficult, time consuming task. The level of coordination and commitment you need to get from all contractors on the job is as critical as it is nearly impossible to achieve. With AeroBarrier, it's simply not a problem.

Chris Benedict, R.A. – Architect
CBRA

“ I don't know of any other way to get the level of tightness we were looking for. No amount of caulking could get this type of result. Most importantly, with AeroBarrier, you know you're going to get the results you want in the end. It's cost-effective and highly efficient at reducing energy costs and improving livability for our tenants. There's nothing that can compete with that.

Justin Palmer – CEO
Synapse Development