Q&A

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Engineers Talk Innovation and the Building Envelope

One afternoon in March 2016, CCI Balconies co-founder **Dave Bradly (DB)** sat down with structural engineer, **Peter Goodeve (PG)** of Goodeve Manhire Partners to talk client needs, multi-residential construction, and balconies. Below is an excerpt from that conversation.

DB: What are you seeing today in regards to multi-residential construction?

PG: In one word, I'm seeing innovation, especially with progressive clients, such as Homestead who has a very large portfolio of residential properties and continues to increase its asset base each year.

The industry is always trying to improve the building envelope. These days we are more and more interested in getting a properly insulated building envelope to keep the cold and moisture out.

Compared to the older buildings, which incidentally are now in horrible condition, the industry has come a long way. We've improved the building envelope around the entire building except for one thing: the balconies.

DB: Oh yes, buildings from the 60s 70s: in my mind's eye I immediately see images of rusty and crumbling concrete balconies.

PG: Today we build concrete balconies with much more durable concrete than back then, but they still deteriorate faster than the rest of the structure. We want to equate the life of the balcony to the life of the structure.

Everyone understands that cantilevered balconies are a problem because of thermal bridging. That's where the composite balconies come in. They solve the problem of thermal bridging and will last the life of the building.

DB: From your perspective as a professional engineer, how have you benefited from the innovation of composite balconies (CCI Balconies' AirBalcony)?

PG: The benefit to me is really from a client perspective. I always want to design the best building for my client and if there is an avenue for innovation, I want that for my client. This is the fundamental reason why they use me to design their buildings. I give them cost-effective, innovative designs.

From the landlord's perspective, AirBalcony will save energy and make occupants more comfortable and happier.

DB: And architects...

PG: Architects are in the same vein as me. They are always looking at the very specific details of the building envelopes. The same is true for building science engineers. Today they look at the details and see one glaring problem: cold bridging through balconies. They have seen the issue for many years, but without a solution they have been forced to ignore it. Instead, they put as much effort as they can on the things they can improve like the wall systems and the insulation.

DB: What about the experience of installation?

PG: The CCIB AirBalcony we used in Kingston for Homestead was a simple crane-in-to -position fully finished balcony, which was put on the existing formwork and tied in with rebar. It is not much different than pouring a concrete balcony except that it's easier because the balconies are so light.

It gets trucked to the site where it is craned to the floor in process (12 at a time). Four guys lift it in place, shuffle it to be square on the building and that's it. It gets cast into the concrete: no messing around with concrete trucks that are typically different than the (air entrained) concrete that goes in the building.

From the perspective of a tenant, it functions effectively the same as a concrete balcony would. You just walk on it, as you would do a concrete balcony.

DB: When this particular project was done a couple of winters ago, I remember that there were a couple of people who were a bit skeptical about using this product. What are you hearing today?

PG: It's all running smoothly. They are extremely happy with the new product, especially because they have heard nothing about it. And when it comes to tenants, no news is good news.