

Installation Challenge

The decision to use radiant capillary mat heating technology introduced a twist into Olympic Village construction – an installation learning curve for everyone involved.

“This system is integral to the drywall ceiling,” says Peter MacLellan of Olympic International. “So the mechanical contractor had to work very closely with the guys doing drywall – not something that usually happens. And the capillary mat installers had to work with the folks doing the lighting – all the trades really had to work together.”

Because we used new products the construction trade isn’t used to, there were no established ground rules or traditions on who handles what. *Mike Mahannah, Olympic International*



Above, Energy Centres are installed in the ceiling of each suite. Background, a detailed layout diagram for installation of the capillary mat system. “Our company got very deeply involved in the design and layout of the ceilings,” says Peter MacLellan of Olympic International. “We needed to make everything as simple as possible, to not leave any guesswork.”

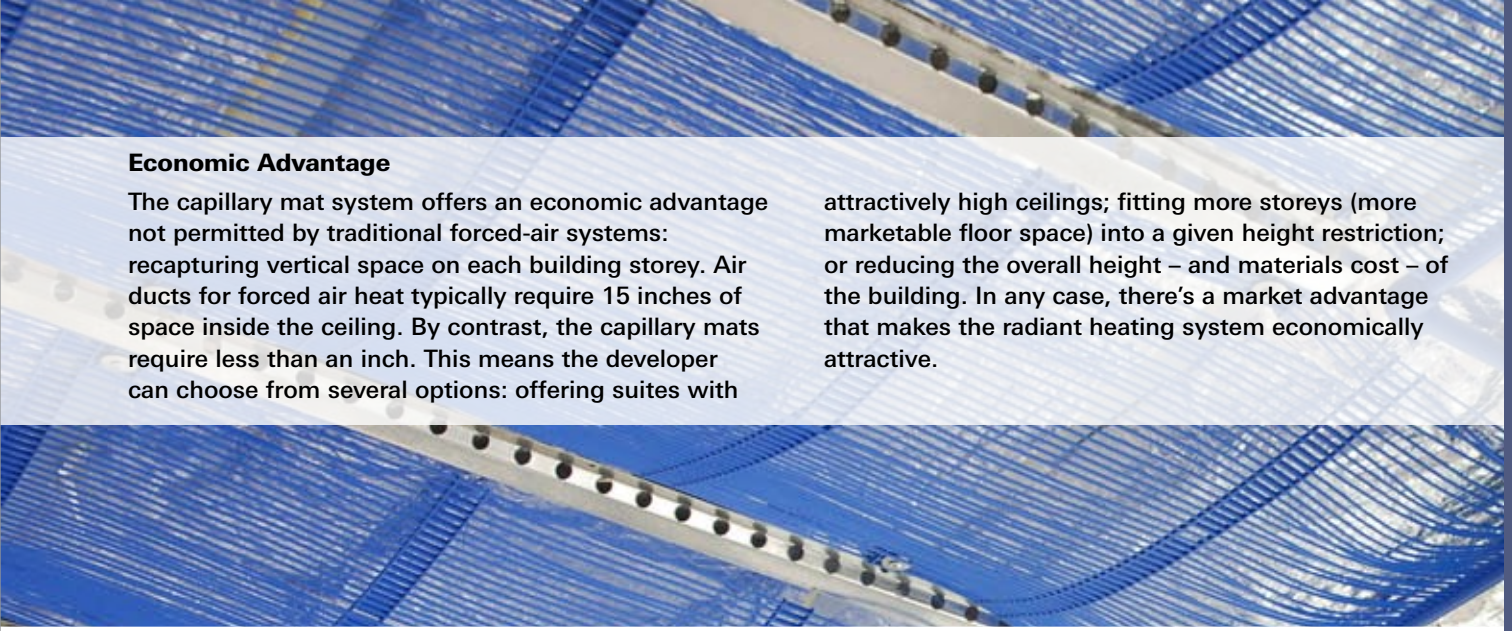
Installation companies found it challenging to provide cost estimates for technology they didn’t know, says Mike Mahannah, President of Olympic International. “Initially there was some resistance. We had a lot of upfront meetings where we showed them the tools, showed them it’s not that complicated. Then the guys on site really got into the rhythm of it.

“Since it was such a big job, we now have five different mechanical contractors who are really comfortable with the process. That capacity will assist these systems to be much more easily adopted in future.”

Economic Advantage

The capillary mat system offers an economic advantage not permitted by traditional forced-air systems: recapturing vertical space on each building storey. Air ducts for forced air heat typically require 15 inches of space inside the ceiling. By contrast, the capillary mats require less than an inch. This means the developer can choose from several options: offering suites with

attractively high ceilings; fitting more storeys (more marketable floor space) into a given height restriction; or reducing the overall height – and materials cost – of the building. In any case, there’s a market advantage that makes the radiant heating system economically attractive.



The capillary mat heating system is made of polypropylene, making it easy to repair (though tenants are reminded not to puncture the ceiling!). Hidden from sun damage, they are extremely durable and long-lasting.

CHALLENGE

To marketers and buyers of real estate: to promote (marketers) and request (buyers) the comprehensive measurement, assessment and reporting of ‘performance values’ associated with all building design features, including energy consumption, resource use, health, livability transportation and amenities.

PROFILE

Peter MacLellan
ESc Engineer
Partner, Olympic International

“We had a vision of what we wanted to do at Olympic Village,” says Peter MacLellan, of Olympic International. “We wanted to reduce energy consumption, increase the comfort of occupants, do it on a large scale and have it be commercially viable. We’ve been making it work – a big piece of the puzzle in making change.”

MacLellan is the lead project engineer for Olympic at the Millennium Water site. He says the fast paced and complex nature of the project was part of its attraction.

“It’s not like a regular project where you design it, then everybody agrees and then you start building. In this case, they started before the design was completed and we had to keep up. There were many challenges coming up that you couldn’t foresee, so we solved them as we went.”

MacLellan says the integrated design process was a great experience. “Working with all the people we needed to, to make this thing go – often things were getting decided in a room with people from all different trades. Usually that’s a long process, but this was all about getting everyone in a room and deciding right there what you’re doing to do. For me, the experience was amazing.”