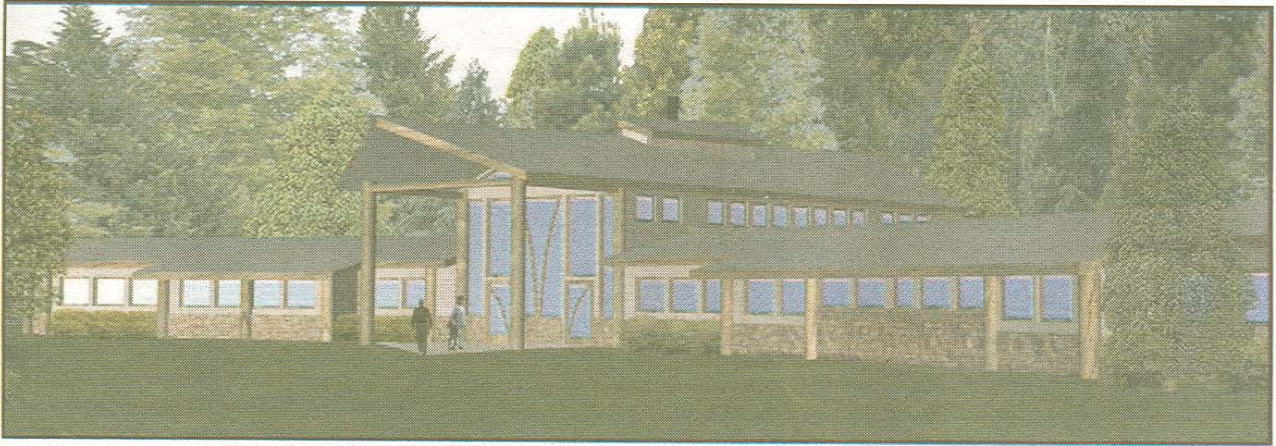


Company using new strategies to reduce energy consumption



Rendering of a new forest education centre for the Ganaraska Region Conservation Authority.

Image courtesy of TOTTEN SIMS HUBICKI (TSH) ASSOCIATES

BY PATRICIA WILLIAMS
STAFF WRITER

Totten Sims Hubicki (TSH) Associates, a firm of engineers, architects and planners, is encouraging clients to pursue what it calls the soft path: resource-efficient buildings with renewable energy technologies to reduce energy consumption.

The firm, which has offices across the country and is headquartered in Whitby, Ont., is putting this approach to work on several current projects, including an addition and renovation to the Lake Simcoe Region Conservation Authority administrative centre in Newmarket and a new forest education centre for the Ganaraska Region Conservation Authority.

It also is incorporating some green strategies, including a vegetated green roof, in-floor radiant heating system and even a fabric duct system, on a school expansion project in the community of Millbrook.

"There are two threads," says TSH project architect Ted Wilson, an associate in the firm and an accredited Leadership in Energy and Environmental Design (LEED) professional who co-ordinates the firm's thrust on the green front.



TED WILSON

"There's what our landscape architect

Mike Hubicki has been doing in terms of developing residential-scale solutions using renewable energy technologies which started almost three years ago when he began looking at building his own home north of Cobourg.

"Then, from my perspective, it's looking at it in terms of our general service base - what we offer clients and how we can introduce green building strategies to our municipal clients primarily and then branch out to our institutional clients."

The firm, which was established in 1962, provides engineering and architectural services to public and private sector clients throughout the province. Wilson says many of those clients regularly perform building condition audits.

"On the retrofit side, we're looking not only at conventional 'build-out' improvements but also where we can introduce green technologies in terms of upgrading the building envelope and the mechanical plant."

Wilson, who has degrees in both environmental studies and architecture, said the firm spelled out in its proposal for the Ganaraska project "what could be done in terms of producing a building that clearly demonstrate principles of green design."

A competition was held to select architects for the showcase \$3.5-million project that is to be constructed next year.

"We really wanted to make this a LEED Canada-registered project," said Wilson who joined TSH in 1987.

The firm, which has just started the design work, is shooting for a LEED silver rating "as a minimum."

"We're looking in part at renewable energy technologies - solar panels and wind generators - as two primary focuses in addition to passive strategies such as a high-performance building envelope and site orientation to take advantage of solar gain."

TSH is taking a similar approach on the estimated \$2.5 million administrative centre for the Lake Simcoe Region Conservation Authority. That project is expected to be tendered this fall.

In that case, the firm also is incorporating some solar thermal elements - to supply domestic hot

water where possible - in addition to an in-floor water heating system.

A back-up, gas-fired hot water system is planned as well.

"Since the centre serves as an emergency response facility, the worst-case scenario is power going out," Wilson said.

"So what we have planned for them is a wind-powered, electrical back-up system which will power up an uninterrupted power system."

The conservation authority plans to sell back power to the grid.

Wilson said sustainable design is "a no brainer" when it comes to the two conservation authority clients.

"These people are already on that plane," said Wilson, whose firm's building department targets projects in the \$1 million to \$5 million category.

While clients generally are receptive to the concept, Wilson says what it comes down to is what's manageable, how much do clients want to commit from a capital point of view and does it make sense for a particular project in terms of pay-back periods.

"We try to be conservative," he said.

"One of the things I learned early on was don't try to incorporate a lot of these strategies on a single project. We want to make the few things that we do in one project work well."

"Let's plan for a few that are solid that we can do up-front in the first phase of a project and think about others down the road."



Rendering of the addition to the Lake Simcoe Region Conservation Authority office.

Image courtesy of TOTTEN SIMS HUBICKI (TSH) ASSOCIATES