SCDSB

PRINT CLOSE

Home / About Us / News & Events / Media Releases

New School Design in Midland Reflects Innovative Environmental Focus

May 8, 2007

The Town of Midland is turning a little greener than usual this spring, as construction continues on an elementary school designed with the environment in mind. Student achievement and environmental sustainability are the driving principles behind the Simcoe County District School Board's innovative design that will create an atmosphere that boosts productivity and inspires learning.

"This is a terrific new school building, but it's much more than that," explained project Principal Architect Ted Handy. "This is a significant investment in the environment and in the community."

Construction began last month on Mundy's Bay Public School, a project that sets high standards for the "greening" of institutions.

"While the environmental sustainability aspect is obviously extremely important, I think it is even more significant that this building is going to be a showcase for the community," said Handy, lead architect at Ted Handy and Associates in Barrie. "This is something Midland will be proud of because it represents their values and their commitment to the environment. This is what the community wants."

When the doors open after construction is finished, students, teachers and visitors will marvel at the unique features of this new school – a design concept that will hopefully lead the SCDSB to a LEED Gold Certification – one of only a few such school buildings to achieve the prestigious award in Canada.

"We are very proud of this plan," said Lou Brandes, SCDSB Associate Director & Superintendent of Facility Services. "At a time when the environment is at the forefront of people's minds, this concept was developed through a series of public meetings involving the parents in this community. The design team presented their ideas and people were excited by what they heard. They welcomed the sustainability concepts. It's very exciting to see it happening."

The LEED (Leadership in Energy and Environmental Design) green building rating system was originally developed by the U.S. Green Building Council to provide a recognized standard for the construction industry to assess the environmental sustainability of building designs. The Canadian Green Building Council has adapted the rating system to specific concerns and requirements of buildings here.

New construction and renovation projects are assessed and receive points for attributes considered environmentally beneficial. For example, five percent of the building materials must be obtained from salvaged materials to earn the salvaged materials credit. LEED Canada covers six topic areas when evaluating projects:

- Site Development: minimize storm water run-off, encourage car pooling and bicycling, increase urban density and green space;
- Water Efficiency: eliminate site irrigation, reduce water consumption, minimize or treat wastewater;
- Energy Efficiency: reduce building energy consumption, use renewable energy, eliminate ozone-depleting chemicals, commission building systems;
- Material Selection: minimize construction waste, re-use existing building façade, use recycled and salvaged materials, use renewable construction materials and design and build more durable buildings;
- Indoor Environmental Quality: incorporate delighting, provide operable windows and occupant control of work space, improve delivery of ventilation air;
- Innovation in Design: use a LEED Accredited Professional, greatly exceed the requirements of a credit, incorporate innovative environmental features not covered in other areas.

For area Trustee Brad Saunders, Mundy's Bay Public School is a natural step for the SCDSB. "I have to say that the environmental emphasis of this whole project is something that is very important to the Board," Saunders said. "We want to do our part for the environment, and I think this building will serve as a template for school construction in the future. It's something we are all very proud of."

Construction trailers are on the site, adding to the excitement for students at Regent and Parkview Public Schools. Both historic facilities will be closed and replaced by the new school.

"It's going to have a major impact on this community and we are all so excited," said school Principal Barb Condren. "We are embarking on an amazing adventure and we hope that everyone will enjoy the journey. It is my hope that as we move into the old building in the fall, that the students will help to plan the transition and enjoy the experience of watching their new school materialize."

The showcase school is expected to attract curious visitors from across Ontario and other parts of Canada once classes begin, and Condren said staff and students will learn about the unique features so they are able to act as ambassadors for the building. "We want to include the students in as many ways as we can, so that they really take ownership of the school," she said. "We will have the engineers and architects come in to show the children how things work and they will be able to teach people about our school."

Students from the two schools slated for closure will join together in the old Parkview building in September, and will have the opportunity to watch the building take shape. "We will have 400 sidewalk superintendents on the job, watching the construction from beginning to end," project architect Handy said. "It will be a great learning experience for the kids and when they move into their new building, the entire school becomes a classroom because of the way it is designed."

From the outside, the new Sixth Street School will look similar to other schools built in the past few years. But a closer look will reveal differences that are amazing. A large skylight built into the roof of the two-storey facility will draw natural light into the building and specially designed light shelves will send daylight throughout classrooms, reducing the number of required light fixtures by about half. Handy used computer animation to explain how adequate light will be directed to all areas of the school, even north-facing classrooms, throughout the day, at all times of the year.

"The design intent is to maximize control of sunlight and daylight," he explains. "Our design takes the building and separates it by creating an atrium in the centre, opening the design up with more glass. That's how we were able to achieve the lighting plan."

And that's just the beginning. Design features incorporated into the building will bring learning to life for students. Project Coordinator Ron Merrifield explains how some of the unique features will work to enhance learning. "We have eliminated the traditional suspended ceiling, and there will just a concrete slab ceiling," he said, explaining that water pipes and other working systems will be visible throughout the building. "That really creates an opportunity for learning. For example, students will be able to track the working sprinkler system of the building to the source, learning more about its function."

"The kids are going to understand exactly how these systems work," explained Merrifield. "The building itself will be a tremendous learning environment. "Rather than just accommodate the systems, we have designed them into the building. They become features that will be important for the kids."

The project demonstrates the SCDSB's commitment to responsible stewardship of the land by incorporating green design features and construction practices. Less water and fewer chemicals will be used in this state-of-the-art building, meaning less impact on the environment. The majority of the floors will be polished concrete, substantially reducing the amount of vinyl and carpet needed and reducing maintenance costs.

In addition to the ground source system designed to reduce heating and cooling costs, an underground water collection system will collect runoff rainwater for use in the toilets. Brad Parkes, Supervisor of Design & Construction at the SCDSB, said the unique design added to the building cost, but the decision will pay off down the road in cost savings for the Board. "For example, it costs a bit more to install a system that will reuse storm water, but we will save thousands of litres of water over the life of the building," Parkes explained. "We're saving money and conserving a limited resource."

By far the largest of those expected cost savings will come from energy conservation, made possible by the introduction of a ground-source heat-pump which is more efficient than fuel burning systems and will cut energy costs by about 47 per cent annually. Other cost saving devices include sensors that will turn off lights and reduce ventilation in empty rooms and other sensors designed to dim lights when daylight levels are sufficient. Exhaust air will also be recycled and reused and officials say the system will improve the learning environment for students.

"Occupants and visitors will feel the difference in air quality," Parkes said. "We know that air quality can have a direct impact on health and productivity and so we believe people will see the benefit of this building from that standpoint." Construction material is being deliberately chosen for their low emissions of known pollutants and allergens. "This will be a healthier environment for everyone," Parkes said. "Studies have proven a correlation between increased natural daylight . . . air quality and student achievement and positive moods."

Along with state-of-the-art design features, the project architects and designers have also managed to preserve the history of Parkview and Regent Public Schools by incorporating elements of the old buildings into the new design. Two

fireplace mantels from Regent, a staircase railing and the front vestibule entrance screen from Parkview will make the move to Sixth Street, and a concrete archway from Parkview has been included at the main entrance. “As you come into the building, there will be a real sense of old character, of the history,” Handy said.

That theme has been carried through the building, with interior classroom doors being reused, several pictures from both locations and an antique time clock adding to the atmosphere and “wonderful sense of history.” “There will be lots of elements of the old and new all working together,” Handy said. “This will truly be a community centre that makes Midland proud.”

Perhaps one of the most astonishing visual elements will be the inclusion of a wall mural painted on a wall at Parkview school many years ago. Because the artwork could not be physically moved, the mural will be transformed and reproduced at the new location through the art of digital photography.

While the physical building will no doubt turn other school boards Green with envy, the environmental sustainability has been carried through the planning of the entire site. Mature trees will remain all around the property. An arborist was consulted to assess trees on the property and determined five that had to be cut down to make way for the building were not healthy. Only two others were felled, and the wood was harvested for a general purpose room floor and trim.

In fact, the effort to preserve the existing landscape resulted in the parking lot being built around a tree. “Three years ago we would have gone in with a chainsaw and made that parking lot square,” Brandes said. “That’s not the case today.” An outdoor classroom, providing plenty of shade, will be created at one side of the school – offering unique learning opportunities for children.

The idea to shoot for a LEEDs certification grew from the original thoughts presented by architect Ted Handy, of Handy and Associates. “This is a tremendously exciting project for us,” Handy said. “It starts to realize an attitude that I started in 1974. Three decades later, it’s coming to fruition.”

Environmental building and sustainability has been a priority for the Barrie architect since the early 70s when he read *Silent Spring*. “That book had a big impact on my designs,” he explained. “I’ve been trying to convince people for all these years and now, all of a sudden, the interest is there. “People are starting to get it.” While designing a building to meet the standards set out for the Midland School is more work than a typical design, Handy said he has been thrilled to be a part of the project.

And Board officials are thrilled at the thought of students being inspired by the building. “They will know how the building works and how it is helping the environment by being energy efficient,” said Lou Brandes. “Hopefully they can take these concepts into their homes and the community. “It’s not just recycling any more; this is one more step to improve our environment.”

Brandes said the new school is the ultimate example of a green building, a natural step from previous building projects where the SCDSB included energy efficient systems. “We have been using a lot of these theories in other projects, but we now have them all together in one place,” he said.

Information:
Lou Brandes, Associate Director and Superintendent of Facility Services
Simcoe County District School Board
(705) 734-6363, ext. 11221

Barb Condren, the newly appointed Principal of Mundy's Bay Public School, reviews the innovative and environmentally-friendly design of the new school currently under construction in Midland.

- Archive
- 2010
- 2009
- 2008
- 2007
- 2006
- 2005
- 2004
- 2003

 RSS Feed

SCDSB
1170 Highway 26, Midhurst Ontario, L0L 1X0
Tel. (705) 734-6363
Web: http://scdsb.on.ca, Email: webadmin@scdsb.on.ca